

University of Alberta

**High School Students' Perceptions of Reading Two Languages with Two
Different Orthographies**

by

Gloria Joan Michalchuk



**A thesis submitted to the Faculty of Graduate Studies and Research in partial
fulfillment of the requirements for the degree of Master of Education**

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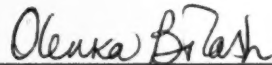
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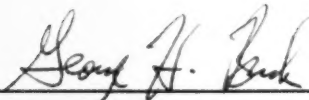
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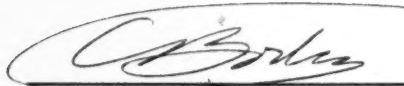
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Abstract

This research explores the differences between reading in a first (L1) and a second (L2) language with two different orthographies. Seven high school students are interviewed as to their remembered and present experience of reading in English and Ukrainian. English is considered the first language of five of the students, while Ukrainian is the first language for the remaining two students.

Adams' (1990) reading model based on connectionist theory and Logan's (1997) automaticity criteria is used as a framework for analysis of the data. Results indicate that automaticity in lower level reading processes, specifically reading speed, effortfulness and autonomy or vocabulary knowledge, continues to be a struggle for Ukrainian as a second language (UL2) learners. The two English (EL2) readers (living in an English dominant society) do not indicate ongoing difficulties in reading in either their L1 or L2. The role of the Phonological Processor as well as the effect of orthography on reading is also explored in this thesis.

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Chapter 1

Whatever you choose to call it, once you begin your creative recovery, you may be startled to find it cropping up everywhere.

The Artist's Way Julia Cameron with Mark Bryan (1992, p. 64)

Introduction

It begins with a 7 year old girl in the second half of grade 2, somewhere in Northern Ontario. Due to the migratory nature of her father's work, this was the third school she had attended in the last 2 years. Although this school was very different from previous ones, the uncomfortable, disconnected feeling may have come from parachuting in half way through the year. Also, the teachers in this school were very different. They were all women who bound their faces in white kitchen towels and hid their hair and bodies under blankets and black cloaks. But for her, school was school and so far, it had been a place of wonder, a place that was active and interesting.

One day in class, the students were all asked to go to the blackboard and write their names with chalk, just like real teachers! Now, the little girl had been practicing how to write her full name for a while, and with a name like "Gloria Michalchuk", it had been no easy learning task. She loved to write her name and look at it, trying to see herself in the letters, trying to see how this combination of sticks and circles could actually be her. She would stare at it a long time. How would people imagine the girl with that name when they perhaps had not even seen

her before? Would they be able to pick her out if she were sitting in a class filled with other girls? "Yes, yes, that's her, I can see that this name is **THAT** little girl. These words, these letters belong to her, that one sitting over there".

The task of writing these two words, however, was never an easy one. The first word was the easiest though.

G l o r i a

Two tall ones and four flat ones. Three fat ones, three sticks. The first one looked in at all the rest and the last one that looked back at the rest. The last word, however, was not easy. It was so long.

M i c h a l c h u k

It didn't help to sound this word out at all! Even though the **ch** and the **ch** were easy to remember because they looked alike, the first one sounded like a /k/ and the second one sounded like a /ch/. There was no explanation or no way to tell the difference. The /M/ and the /i/ were easy to remember because they were the only ones that were "backwards" meaning, the big one came first. The big one and then the little one, and the little /i/ even looked like a baby or as if it came from the first letter /M/.

As she stood at the blackboard, chalk in hand, her anxiety began to build. The writing of the first word had gone so quickly but the next word, her last name was difficult. "It's easy." her mother had said "After the first two letters, then its one small one, one big one, small, big, small, big and look, these are the same." She

could remember this advice but how many were there, two /ch/'s or three? The /c/ looked so much like the /a/, only the back was different. The /u/ looked like an upside down /c/ and it was difficult to remember because the /k/ was almost like an /h/. Was there another /c/ before that last 'k' to make it sound like a /k/, like the first 'c' before the 'h'? Stuck on the last letter again! She couldn't remember.

At that age, she could see the shapes or images formed in her name. There was that lovely repetitive pattern, like drawing waves in the ocean. The other children had finished writing their names and were already sitting at their desks. The room was so quiet as she stood there thinking. Now was there a 'c' before the last 'k' or not? She answered truthfully when the teacher in the big black dress and funny hat asked her what the problem was. "I can't remember if there's another one of these [pointing to a 'c'] before this one [pointing to the 'k']", she quietly whispered. I still remember the words echoing in the room, embedding themselves in my chest.

"Imagine, a big girl like you and she can't even spell her own name!" As the laughter from the class bounced off the walls, and swirled around her, tearing at her dress, pinching her cheeks, she looked at all the other names written on the blackboard. She felt the sting of heat rise to her face, and something well up inside of her. She knew her father was very sensitive about their name. She had also seen and heard people's faces and voices change when they heard their name. It seemed to be a place where everything stopped, where a lot more talking had to take place

between either her mother or father and whoever else was looking at or trying to write that last name.

"Yeah, but my name is twice as long as theirs." She felt the immediate release of tension in her body as the words spit from the intense heat in her cheeks. The silence in the room at that moment felt as oppressive as the laughter had been only minutes earlier. The look that hurled from the teacher's eyes at that moment could have been a blow that would have devastated or at least torn those of a more fragile fabric. But then this teacher hadn't met the girl's mother yet! The youngster was immediately marched to the Sister Superior's office under a hail of images of how she was about to get the strap for being such a bad girl. The big office offered some relief in that it silenced the teacher.

Sister Superior was an older woman who didn't look very mean. She didn't seem like the kind of person who would make you put out your little hand and then hit it really hard with a leather strap. She turned out to be a reasonable, kind woman who started the conversation with a simple question, "So what happened Gloria? Why were you talking back to your teacher?" She listened patiently as the large eyed dissident squeaked out her side of the story. As the conversation continued, the corners of the elderly woman's mouth twitched and when they finally decided on an upward direction, soft, curved lines began to form on her face. "My name is twice as long as everyone else's and I was at the very end. They only have to remember really short names".

"Well, you do have a point there" were the words that started the one-on-one discussion regarding what it was she had been confused about when writing her

name. "Oh, there is a simple way to remember this", the sparkling, elderly eyes said, "only the first two letters are different, tall-short [Mi] and then all the rest are little-big [ch], little-big [al], little-big [ch], little-big [uk]". No strap, only a gentle warning not to talk back to the teacher in the future.

This incident is crystal clear in my mind, as if it happened yesterday. Is it the humiliation, the newness of being brought to a woman in black robes to be ritualistically punished, the fact that that particular incident caused me to never have difficulty spelling my name again or a combination of these that has crystallized this memory into my psyche? For whatever reason, this memory is the seed that germinated the initial research behind this thesis, the differences between first and second language reading.

One of the first things a child usually remembers in his/her literacy experiences is to read or at least to recognize his/her own name and then, of course, to write it. Many names, especially if transliterated from a different orthography or writing system, can cause confusion when it comes to pronouncing or writing them in English. Slavic names, transliterated from Cyrillic, often tend to be long. Stress, intonation and the sounds within the language are not easily transliterated into English, thus the two /ch's/ in my name both sound very different; the first like a /kh/ and the second as the letter combination in English dictates /ch/. The first 'ch' is a translation of the phoneme "x", a fricative that sounds like an 'h' pronounced glottally, a sound that does not exist in Canadian or American English. As a child growing up in a Ukrainian community, I had heard both pronunciations, the authentic Ukrainian one and the various Anglicized versions, which further

complicated issues. The vowels also sound different in the two languages. I learned to read and write in English well before learning the equivalent in Ukrainian; however, orally, I was exposed to more Ukrainian than English before the age of 5. Since then, I have had much less exposure to Ukrainian. Furthermore, as a child I was accustomed to hearing a wide variety of ethnic groups, all with varied accents. I always wondered if this had an impact on my ability to read or to write in any way?

The Adult

As a result of having been exposed to so many different cultures and languages in the bush camps of Northern Ontario, I have always had an interest in other languages. In those early days, it seemed that almost everyone's parents were either first generation Canadians, French Canadians or immigrants of Italian, Portuguese, Swedish, Polish, Ukrainian, British, Dutch, Yugoslavian, or German descent. I began traveling to different countries at 16 years of age (Spain, Morocco) and then continued to explore not only countries but also their languages. Several years ago I taught English in Japan and had the opportunity to relive my childhood experience of learning to read in a language with a different script. Japanese uses three different orthographies, one logographic or picture system (Chinese Kanji) and two syllabries, hiragana and katakana, the latter reserved for foreign words. When, once again, I found myself surrounded with flat sticks and circles I began studying and trying to memorize the various symbols of hiragana and katakana.

I taught in Shimotaga, a tiny village on the outskirts of a small, beautiful city nestled into the hills hugging the ocean named Atami. The city had been famous in

its day for Japanese honeymooners and its high, jagged cliffs peering over the crashing ocean had also been famous in their day, for suicides. Once a week, on Thursday, I had the opportunity to escape my hectic schedule and venture to Atami to teach in a one room building perched at the top of a long set of stone stairs overlooking the central train and bus station. I loved this location, not only for the variety offered but also for its more relaxed teaching schedule. During one of the breaks in my schedule of student appointments, I sat on the top of the stairs and watched the buses drive in, unload, pick up passengers and then drive off to some unknown destination. I lazily observed everything when suddenly one of the busses came to life, that is, one of the signs on the buses seemed to jump out and actually transform from a two dimensional object to a 3-D one. Although my description of this moment may seem dramatic, I don't know how else to describe these phenomena other than exactly how I experienced it in that moment. My whole perception of physical reality actually changed when the letters and accompanying mental image, like a shard of glass, moved. The hiragana symbols said *onsen* the Japanese word for 'hot springs' accompanied by the name of the city where the *onsen* existed. In retrospect, I remember not only my depth of perception of the characters/letters and the mental image but I also have a memory of the echo of the word; that is, the sound created by the combination of symbols. I was exhilarated and motivated at the time to learn more. I had memorized to a certain extent the hiragana symbols but now I wanted to learn more words or vocabulary so I could actually understand what I had been sounding out on earlier occasions. These two

experiences of reading have remained in my consciousness along with my various other memories of reading in French and Ukrainian.

L1 Reading Memories

My earliest memory of English reading did not involve seeing print. I remember being left for one day, when I was 4 or 5 years old, in a Northern Ontario bush camp, in a one room schoolhouse in Camp 252 with Mr. Magnuson, the teacher. I recall being in the school, however, I am unclear if the beautiful pictures of people wearing vivid, yet soft coloured robes were from that incident or if they are from an earlier memory. As I gazed at the pictures and listened to the teacher, in this case, the man's story, I wondered what it would be like to wear such clothing and how beautiful and peaceful everything looked in the picture. I had never touched a little lamb and it seemed to be resting so calmly, like a cat, near the children and Jesus in the picture. I somehow knew that this picture was a parable, a story from the big black book with all the writing in it. This book was called the Bible; this was where the man said he had learned this beautiful story.

My next memory, as described at the beginning of the first chapter was not idyllic. Neither was the one that followed. These memories were from grade 3 when I was 8 years old and hold feelings of the intense boredom I felt with the "Dick and Jane and Spot" books. I also remember an actual physical discomfort from the difficulty and accompanying frustration of learning to read in English. I felt angry at times and kept asking why everything kept changing all the time. Just when you thought you had it, when you understood something, pow, you were hit with a

change. Why couldn't they make up their minds? If it's an /f/, why did they change it sometimes to a /ph/? It didn't make any sense. Sometimes you pronounced the /b/ and sometimes you didn't and well, when it came to words like *new/knew* or *no/know* or *through* and *blue...*, well, forget it! I was never going to learn to read because they kept changing the rules all the time.

L2 Reading Memories

I was 10 years old before I learned to read in Ukrainian in the bi-weekly after-school, four-hour program (two hours every Tuesday and Thursday) offered by the Ukrainian Community Hall. Although it was often tedious to spend an additional four hours a week in school, after an already full school day, I loved learning to read the new, curly letters. I had grown up hearing Ukrainian all around me but I hadn't realized it had its own alphabet. Furthermore, even though I had been studying French for about a year, it was so much more exciting to be able to recognize a certain word, one that I had heard before, although had seldom spoken it. To me the Cyrillic alphabet was like learning a new secret written code. I was part of a club, a group of people who shared this special code, this special way to communicate that set us apart from those around us. Up to this point, I hadn't consciously realized that in Ukrainian, there were different, new sounds compared to English. These sounds were fun to try and pronounce and left me feeling incredibly wise, since I knew something my English counterparts did not. Perhaps these strong emotions of superiority, kinship and separateness were reactions and defense mechanisms to the

prejudice, name-calling and put-downs many Ukrainians experienced in Canadian society, in my case, in the schoolyard.

The Impetus for this Research

During my studies in Second Language Education, I obtained employment at the Ukrainian Language Education Centre (ULEC), a department within the Canadian Institute of Ukrainian Studies (CIUS). Among its many other duties, ULEC publishes the elementary school *NOVA* reading and language development series used in the Ukrainian Bilingual Program. During my employment, for the summers of 1999 and 2000, I was involved in numerous discussions, research and work projects on reading in English, Ukrainian and other second languages such as Polish, Russian, French and German. Often discussions revolved around our own personal experiences of reading. These discussions were not coffee or break time topics but were a part of investigation and debate on many of the academic, theoretical articles being utilized in ULEC's publishing of reading materials. These discussions awakened additional, very precise memories of learning to read in English and Ukrainian, over and above the haunting memory (described earlier) of writing my name on the blackboard.

The vividness of these memories and the subsequent discussion generated convinced me that this method of inquiry could perhaps bring into one's consciousness the reading process itself. My curiosity was aroused so I began an informal investigation of my own memories, shared them with friends, acquaintances and soon discovered that they too were able to recall distinct incidents. Could these

memories contribute to the extensive body of knowledge that already exists in reading? In particular, would memories of early reading experiences in a second language be the same as those in a first language?

Chapter 2

Literature and Research - First and Second Language Reading

The Second Language Shadow

When L1 precepts are extrapolated to L2 research without due regard for the unique demands posed by L2 reading, confounding elements arise, inadequate conceptualizations evolve, and practice is less than ideal (Koda, 1994, p. 1).

In an attempt to determine how L2 reading may be different from L1 reading, this thesis investigates and compares early memories of first language (L1) and second language (L2) reading experiences of high school students. The extensive, inspiring literature review on English as a first or dominant language (EL1), conducted in preparation for this study, confirms what Koda (1994) aptly describes in the previous quote. I refer to this phenomena as the *Second Language Shadow* because until recently, second language reading research has remained in the shadow of English L1 reading paradigms.

The majority of EL1 empirical research focuses on both ways to measure cognitive reading processes and, through attention to readers' experiences, suggestions about possible effective teaching strategies. But recent cross-linguistic research (Koda, 1994; Chikamatsu, 1996; Romatowski, 1981; Horiba, 1996) has uncovered the fact that second language reading is not a direct reflection of English, or for that matter, L1 reading. In fact, it has become apparent that readers do not have the same motivation to read in both their L1 and L2. For example, the

"affective variable" or motivational aspect of reading already shown to be the foundation upon which the success or failure of L1 is built, is of even greater importance in L2 reading acquisition (Heath, 1982; Delpit, 1995; Janik, 1996). This chapter will present highlights of my literature review, including a brief history of reading research and definitions of key concepts upon which this thesis is founded, namely automaticity, attention, word recognition and shallow and deep orthographies.

A Brief History of Reading Research

Since past EL1 reading research has heavily influenced L2 reading research, and in particular, L2 reading instruction, its history is relevant to this study. Edmund Henderson (1981) in his book, *Learning to Read and Spell*, gives a detailed account of the history of English reading theories, research and subsequent classroom teaching methods, beginning as early as the mid 1700's. Numerous other researchers (Nicholson, 1993; Carrell, 1987; Samuels & Kamil, 1984) have provided a more than adequate reiteration of this history. This section will outline the history of six approaches/theories/models to reading that heavily influenced both L1 and L2 classroom practice: the bottom-up approach; the top-down approach; psycholinguistic reading model; the interactive reading model; connectionism; and Adams' (1990) reading model. The underlying theory of these six approaches, psycholinguistic theory and connectionism, will also be discussed.

i) The Bottom Up Approach to Reading

Linear bottom-up reading strategies are based on the understanding that the reader recognizes the orthography or the written symbols of a language, their corresponding sounds and then systematically advances to combining sounds through recognizable spelling patterns, to whole word recognition and sentence comprehension until eventually, he or she comprehends the entire text (Grabe, 1988; Eskey, 1988; Carrell, 1987). Teaching reading was data-driven with emphasis placed on rote learning, the sounding out of words and, as reflected in the experience of student's of the widely used *Dick and Jane* basal readers¹ from the 1950's, the continuous, systematic repetition and introduction of vocabulary and phrases. Teachers who follow this model teach as if reading is linear, stages are hierarchical and the reader, for the most part, is of secondary significance.

Carrell (1987) contends that the audio-lingual method of teaching second languages (SL), popular in the 1970's, conforms to L2 bottom up reading strategy use. Although the audio-lingual method emphasized speaking and listening skills, researchers in the late 1960's realized that L2 speaking proficiency did not automatically pave the way to reading. Thus, bottom-up reading strategies were introduced and extensively used to compensate for reading deficits (Carrell, Devine & Eskey, 1988; Elley, 1979).

As suggested about L1 reading, the bottom up approach is a passive learning process:

¹ Although the Dick and Jane series was intended as a language experience approach to teach reading, many students experienced it only as a basal reader. For example, when I learning to read in a one room school house (in which eight grades were taught, it was presented as text that was mimicked and memorized.

... only recently has second language or foreign language reading been viewed as an active, rather than a passive process. Early work in second language reading, specifically, reading in English as a second language, assumed a rather passive, bottom-up, view of second language reading... problems of second language reading and reading comprehension were viewed as being essentially decoding problems, deriving meaning from print... (Carrell, 1988, p. 2).

ii) The Top Down Reading Approach

Top-down processing is defined by Libben (1996) as "a type of processing using a set of expectations to guide phonetic processing and word recognition" (pp. 397).

Eskey and Grabe break down this term in the following manner.

Terms like *top-down* or the contrasting *bottom-up* (or, for that matter, *interactive*) are, of course, merely metaphors for the complex mental process of reading, *top* here referring to such "higher" order mental concepts as the knowledge and expectations of the readers, and *bottom* to the physical text on the page (1988, p. 223).

In short, this approach factors in and fosters the reader's background knowledge and cognitive abilities used during the reading process. This method was and remains popular in second or foreign language reading for several reasons, one being that it avoids the tediousness of letter-by-letter and word by word reading (Carrell, 1987, Clarke, 1988).

iii) The Psycholinguistic View of the Reading Process

The introduction of the psycholinguistic approach to reading in the late 1960's and early 1970's is attributed by most writers to Goodman and Smith (Gollasch, 1982; Henderson, 1981; Carrell, 1987; Samuels & Kamil, 1984). Goodman (1970) defines reading as "a complex process by which a reader reconstructs, to some degree, a message encoded by a writer in graphic language" (p. 4). This overall

social acceptance of the role of cognitive psychology facilitated the view of reading as a perceptual system or a "psycholinguistic process, an interaction between thought and language" (Goodman, 1970, p. 6). The key descriptor of this new model is *interactive*.

This interactive view of reading acknowledges three distinct aspects of reading:

(1) the general relationship between language and thought; (2) the dynamic relationship between the written text and the reader who was motivated or stimulated by the necessity to create meaning from what was being read (during this stage, labeled "decoding", readers interacted with the text through their own filter of perception or their own cognitive processes resulting in text meaning reconstruction); and (3) the process a writer undergoes when converting his or her message (designed to be received and understood by the reader) to written form, known as *encoding*.

Over several decades, Goodman made three significant contributions to our understanding of reading: a) moving the reader from playing a passive role to an active one in the reading process; b) the short circuit; c) analyzing the reading process into information categories, cycles and cognitive processes

a) Moving the reader from playing a passive role to an active one in the reading process

According to Goodman (1970), a parallel exists between hearing the spoken word and reading the written word, both of which are deemed *receptive* language.

Therefore, reading is deemed similar to listening in that a speaker sends a message, and a listener who is *selective* and *anticipatory* in what he or she perceives, hears and interprets the message with varying degrees of accuracy. "In short, he not only learns what to pay attention to, but, equally important, what not to pay attention to"

(Goodman, 1970, pp. 13). This quote clearly demonstrates the shift that placed the reader (or his/her cognitive processes) in the driver's seat and directly challenged the former bottom-up approach that is supported by the belief that if the reader is competent in and builds on the sound-to-symbol relationships, reading success is inevitable.

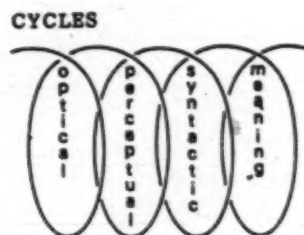
b) The short circuit

By distinguishing a parallel between spoken and written language and by acknowledging the reader's different cognitive stages, Goodman (1970) paved the way for a top-down reading approach that had a major impact in classrooms, in many parts of the world. Goodman also, introduced the term *short circuit* to indicate the variety of reasons why a reader may stop non-productive reading before comprehension is attained². The "short circuit" led to miscue analysis, a major strategy for determining exact difficulties of readers.

² A reader may abandon a text for several reasons such as illegible hand writing, lack of interest in the topic, the inability to understand too many of the words, etc. These are all examples of "short circuits".

c) Analyzing the reading process into information categories, cycles and cognitive processes

Goodman's (1975) reading model divided the information contained in text, into three categories: graphophonic, syntactic and semantic. He also named four cycles the reader goes through during text meaning reconstruction: optical, perceptual, syntactic and meaning. In his later work (1996), he changes the use of these terms to: graphophonic- the signal level (includes oral and written text); lexico-grammar (includes syntax and wording); and meaning and pragmatics (includes culture, context, interpersonal, experiential and textual meaning).



(Figure One- from Goodman, 1970, p. 9)

Goodman (1970) further divided the cognitive processes of reading into five categories: *recognition-initiation*, *prediction*, *confirmation*, *correction* and *termination* of the task. In his later work he adds a sixth category- *sampling* (Goodman, 1996).

Regarding second language instruction, Goodman (1970) states "learning to read a second language should be easier for someone already literate in another language, regardless of how similar or dissimilar it is" (p. 68). He adds that control over the

grammatical system, strong semantic input, choice of texts, level of L2 oral proficiency, use of natural context and focus on comprehension strategies are critical in L2 text reconstruction (p. 69).

As noted, Goodman and Smith's psycholinguistic interpretation of the reading process created a major shift in classroom teaching from previous bottom up or linear decoding methods. In first language settings, students had been memorizing the alphabet and then systematically building their reading skills via phonics and skill-based activities (i.e. basal readers). The psycholinguistic influence fostered top-down approaches that led to the 'whole language' movement. This approach stressed the need for children to learn words in context, that is, in a natural way (Nicholson, 1993). A plethora of new literature-based reading programs, such as *Shared Book Experience* (Holdaway, 1979), *Big Books* (Y. Goodman, 1989) etc. gained popularity and changed the climate of the classroom to a more student-centred approach (Nicholson, 1993; Stahl, McKenna & Pagnucco, 1994).

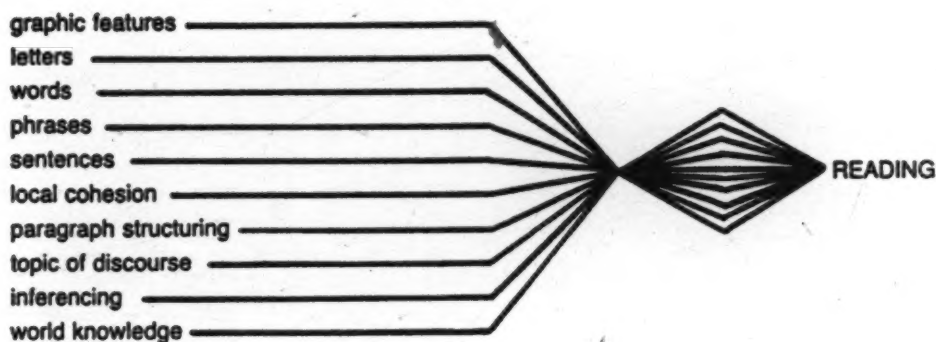
iv) Interactive Reading Models

Interactive reading models further helped to refine our understanding of the reading process by identifying the role played by *automaticity* (based on limited capacity models of cognition and schemata). Although the psycholinguistic approach to reading could be considered one of the first interactive models, Rumelhart (1977) is credited with actually dubbing the term *interactive* (Rumelhart & McClelland, 1981). Interactive reading models differ from Goodman's psycholinguistic model in three ways. Firstly, interaction focuses on the processes

going on inside the reader, rather than on the interaction between the text and the reader. Second, exploration into the nature of reading processes began to suggest that processes occurred simultaneously, not sequentially (Levy, 1979; Eskey, 1988).

Richards (1998)³ effectively describes the momentum behind this change of focus:

(theories about)...fluent first language reading posit an interaction of a variety of processes, beginning with the lightning-like, automatic recognition of words. This initial process of accurate, rapid, and automatic recognition of vocabulary frees the mind to use several simultaneous processes involving reasoning, knowledge of the world, and knowledge of the topic to construct meaning. Although the hypothetical constructs *bottom-up processing* (i.e. text-driven) and *top-down processing* (i.e., concept-driven) were useful heuristics in conceptualizing earlier models of reading, it is probably better to leave them behind lest they unhelpfully polarize a description of how mental processes interact with text features in fluent reading comprehension (p. 12).



(Figure Two- from Grabe, 1988, p. 59)

Finally, this new model of reading drew upon limited capacity models of cognition to explore the automatic recognition of words. *Limited Capacity Theory* suggests that our cognitive processes are not bottomless, but limited (Laberge and

³ Furthermore, Richards briefly describes the history behind the initial separation and naming of top-down and bottom-up processes and the resulting division and conflict between advocates of the two processes.

Samuels, 1974). In other words, when all of one's attention is spent on decoding or recognizing letters, little or no attention is available for processes that involve semantic, syntactic, schematic and contextual knowledge (Naslund & Smoklin, 1997; Eskey, 1988).

On the other hand, in non-fluent reading, a single component process such as word recognition might by itself entirely consume the reader's cognitive resources (Laberge & Samuels, 1974, p. 115).

Thus, a concrete example would be one's own experience in second language reading or the experience of listening to a child labour over a reading passage, trying to sound out every word. Because full attention is given to decoding or bottom-up reading processes, quite often the reader will not have any idea as to the passage's content upon completion of the reading (Carrell, Devine & Eskey, 1988; Elley, 1984).

Laberge and Samuels (1974) refer to the concept of limited cognitive processes:

...in skilled reading the simultaneous processing of word recognition and comprehension is possible because their combined attentional demands do not exceed the reader's available cognitive resources (p. 115).

Attention and *word recognition* are both terms describing Limited Capacity Theory in current reading research.

Interactive models of reading are also rooted in Schema theory. Schema theory focuses on how knowledge is stored in human memory. Anderson and Pearson (1984) credit the recent information processing researchers who used computers to simulate human cognition as advancing this theory. Specific to reading, text reconstruction or the ability to make sense out of what one is reading relies on one's

background knowledge, especially in L2 reading where cultural differences may play a role in comprehending a text. In his article, *Effects of Cross-Cultural Schemata*, Barnitz (1986) provides an extensive review of studies that focus on schemata, highlighting that "...Hudson (1982) indicates that existing prior knowledge or induced schemata can override the short circuiting effect of limited second language proficiency" (p. 97).

v) The Current Trend – Connectionism

As information processing theories⁴ began to be viewed as more interactive, the term *connectionism* entered the reading world. Artificial Intelligence⁵ is the medium through which information processing theorists and early connectionism theorists conducted much of their research. Connectionist theorists shared with previous information processing theories the view that reading involved interaction among

4

The interpretation of the human brain as an information processing device facilitated research by computer scientists who attempted to simulate human cognition. Gough (1972) is credited with introducing the controversial information processing approach that focused primarily on the mental or cognitive processes involved in reading. Gough's model suggested that the text activated various 'nodes' in the brain and it was this activation that facilitated reading comprehension (Samuels & Kamil 1984). Laberge and Samuel (1974) expanded Gough's model by emphasizing the need in reading for fluency via automatization of decoding, semantic, syntactic and contextual reading processes. These models, however, were considered to be linear and hierarchal. Leslie and Thimke (1986) address this deficiency by introducing connectionist interactive reading models.

⁵ Following the model that computers have been constructed and trained to simulate human cognitive processes, McClelland's GRAIN network research (1991 and 1993) computed general information processing principles. The acronym, GRAIN, suggests that cognitive processes are Graded, Random, Addaptive, Interactive and Non-linear (Plaut, McClelland, Patterson & Seidenberg 1996).

cognitive processes. However, they disagreed on the nature and timing of interaction. The following definition of connectionism describes a major theoretical difference from earlier information processing theories:

An alternative view comes from our research on connectionist or parallel distributed processing networks, in which computation takes on the form of cooperative and competitive interactions among large numbers of simple, neuron-like processing units (McClelland, Rumelhart, & the PDP Research Group, 1986; Rumelhart, McClelland, & the PDP Research Group, 1986). Such systems learn by adjusting weights on connections between units in a way that is sensitive to how the statistical structure of the environment influences the behaviour of the network. As a result, there is no sharp dichotomy between the items that obey the rules and the items that do not (Plaut, McClelland, Patterson and Seidenberg, 1996, p. 56).

In simple terms, connectionists hypothesize that upon commencement of reading, written symbols cause an "excitation" in the reader's brain. For example, if a reader is familiar with and encounters the letter /t/ and the letter /h/, excitation will occur from each of these letters individually which in turn accesses the sounds of these individual letters /t/ and /h/ from the reader's memory. However, if these letters occur together, /th/ (as in the word "think") and the reader is not familiar with the word but is familiar with the pattern /th/ excitation will occur between these two letters. The letters will no longer be sent separately to the brain. Instead, this intra-letter excitation will send an impulse of this new combined pattern into the brain via the reader's cognitive processes. If the impulse is strong enough (and reaches "threshold"), it will access the sound of /th/ by stimulating a node in the brain. Once threshold is reached, the reader then will have access to the sound.

As mentioned, the strength of associations between nodes is heavily influenced by frequency of exposure (how often the pattern has been seen) and consistency of the

patterns of activity of written symbols (how often it occurs in the English language). In short, the more often the reader has been exposed to an individual letter, spelling pattern, the better the chance that he or she will recognize it. Empirical linguistic studies often test a reader's knowledge of real, non- and pseudo-words in an effort to prove that at some level, children are able to distinguish between acceptable (e.g. /spr/) and non-acceptable (e.g. /spm/) English spelling patterns (Wimmer & Goswami, 1994; Leslie & Thimke, 1986).

This example can also be extended to whole words. If the word 'the' is seen often enough, and the connection between this visual pattern (/the/) and the corresponding node (where the corresponding knowledge/meaning or meaning of the word is "housed") is strong enough, the reader will be able to immediately decode this word via the strength of the connection. Rott (1999) found that six exposures to a word significantly increased a student's retention of vocabulary knowledge (after one month).

However, it is the strength of the connection (intra-letter, intra-word, and in more developed reading, intra-sentence) to the nodes in the reader's brain that is responsible for accessing knowledge or in this instance, decoding text. This is a very important distinction for reading instruction. In other words, it is not the number of times a reader has been exposed to a word that ensures its recognition but the importance it has to the reader.⁶ If a letter or a letter combination or a word (such as a child's or reader's own name) is significant, the reader may need only one or two

⁶ Thus, although the basal reading series contained ample repetition of words, the principal of language upon which this was based is not that of connectionist theory.

exposures and a strong enough connection will be created so the word will be remembered (Logan, 1997).

Koda (1996)⁷ refers to Logan (1987) as a reference to describe connectionism in this way:

Connectionist models have several definitive characteristics...they assign no specific rules to basic processing procedure...activation of multiple processors takes place simultaneously...knowledge is not localized in symbolic features; instead, it is distributed over network units (p. 452).

This also highlights another important development that challenged the dual-route view of how information was represented in the brain. Dual-route theorists argue that the meaning of a word can be accessed directly because its 'mirror image' could be found somewhere in the brain. Connectionists, Plaut et. al. (1996) state,

In particular, dual theorists.... have claimed that pronouncing exception words requires a lexical lookup mechanism that is separate from the sublexical spelling-sound correspondence rules that apply to regular words and nonwords... Seidenberg and McClelland (1989)... challenged the central claim of dual route theories by developing a connectionist simulation that learned to map representations of the written forms of words (orthography) to representations of their spoken forms (phonology) (p. 57).

This statement reveals two components of connectionism. First, it incorporates both the idea of competition (and its antithesis, inhibition) and the nature of 'network' interaction during retrieval processes. That is, interactions are considered to be competitive in that the node or area of greatest "weight" will cause an association or win out over the area or node where less activity occurs. Thus, if an initial visual pattern of activity is generated from the orthography of a word, it will be attracted to

⁷ Koda's (1996) mention of no assignment of rules refers to a principle of the previously accepted *dual-route* theory. Dual-route theorists hypothesize that language was governed by sets of rules for regular and exception words meaning that knowledge of these rules, whether conscious or not, facilitated reading comprehension.

the 'appropriate semantic attractor basin' in the brain where a 'settling process will clean up this pattern into the exact meaning of the word" (p. 56).

Second, current research, as well as the earlier work of McClelland, et. al. (1996) also explore the notion that items or representations, stored in the brain, co-exist in 'quasi-domains' that allow for access to approximations instead of precise lexicon. For example, during the reading process, the strength of the association between nodes allows for access to alternate, yet related knowledge, as displayed in various forms of dyslexia. This claim supports former research that indicates that although critical in the early stages of learning to read, proficient readers do not necessarily pay close attention to all the details of orthography. But for poor readers, even one missing feature or letter in a word can seriously inhibit reading comprehension for poor readers (Eskey, 1988). Thus, these less skillful readers have been found to rely more on contextual cues, increasing the likelihood of randomly guessing at meaning (Adams 1990; Logan 1997; Henderson 1982; Naslund & Smolkin 1997; McBride-Chang & Chang 1996).

Connectionism distinguishes itself from previous models of reading in 3 ways: the simultaneity of interactions; the strength of the connections between both processors, and the reader and the text; and how knowledge is stored.

vi) The Adams' Model of Reading

The earlier psycholinguistic reading models highlighted the interaction between the reader's cognitive processes and the text while the earlier interactive models highlighted the interaction among cognitive processes. Although still an interactive

model, connectionist theory differs from earlier reading models, in that it places greater emphasis on the nature of information storage, memory and lexical access (information retrieval). Adams' (1990) current model of reading is based on McClelland et. al.'s (1996) connectionist research:

...skillful word reading is held to be dependent, not just on the appearance or orthography of words, but also on their meaning and pronunciations... Skillful reading is the product of the coordinated and highly interactive processing of all three (Adams, 1990, p. 107).

Reading, according to Adams' (1990) model, is facilitated during text comprehension by four processes that operate simultaneously. Adams calls them: the Orthographic Processor, Phonological Processor, Meaning Processor and Context Processor (see diagram). Since the visual written symbols activate the Orthographic Processor, they are the essential starting point during reading. This processor tracks associations or excitation between letters, recognition of spelling patterns (order and combinations) and is sensitive to awareness of spatial locations, critical first steps in the initial stage of reading. The Orthographic Processor, whose efficiency is highly dependent on the speed and accuracy of letter recognition, almost instantaneously activates the Phonological Processor and Meaning Processor.

Additional factors that influence speed and accuracy of the Orthographic Processor include frequency of exposure to the visual pattern, attention to details and the reader's reliance on context. The more often the reader has seen the word, the greater the chances of recognition (Adams, 1990; Stanovich & West, 1989; Samuels & Flor, 1997). The Context Processor may also be activated at this time to determine if it can provide help for text deconstruction.

The Phonological Processor accepts both visual images during reading and also speech directly from the external environment. This input can be provided by other speakers as well as from sub-vocalization by the reader of text creating what is referred to as a 'phonological image' (Adams, 1990). Concrete examples of the Phonological Processor at work can be "heard" when one is being read to by someone else or when reading aloud to one's self or during silent reading when we incorporate 'hearing the sound of the words- silently' (sub-vocalization). As mentioned earlier, the Phonological Processor is a parallel process that is activated by the Orthographic Processor to search for an auditory imprint or a sound match for the letter string (word).

The Phonological Processor does two things in the brain at the same time: (1) if a word or spelling pattern is pronounceable, it notifies the Orthographic Processor and (2) it sends the sound pattern (of the word) to the Meaning Processor. With input from both of these Processors, the Meaning Processor searches the reader's memory for the meaning of the text.

The strength of the association between processors and their corresponding shared information nodes, increase the possibility of word comprehension in that the strongest association (in any of the processors) will 'outweigh' the others and therefore determine word meaning. As illustrated, these processes work simultaneously, are affected by the frequency or familiarity of the stimulus or letters of the text, yet remain flexible in that they vary within individual readers and are sensitive to the reader's stage of skill development. This is admittedly a simplified version of a very complex concept.



(Figure Three - from Adams, 1990, p. 158)

Key Concepts

i) Automaticity

Central to all reading theories is the acknowledgement that automaticity of reading processes is essential for effective text comprehension. Researchers also agree that frequency of exposure or, more simply put, practice improves the chances of the reader acquiring automaticity in certain processes during reading. Logan (1997) defines automaticity as "well-practiced skills and deeply ingrained habits...we perform easily, with little effort and little conscious thought" (p. 123).

Limited capacity models acknowledge the role of short-term memory as well as the need for *automaticity* during the reading process. Koda (1992) explains,

...deficiency in lower-level processing operations strains the limited capacity of short-term memory, and inhibits text integration into a meaningful

sequence... The limited capacity model thus predicts that when a reader is heavily involved in lower-level processing operations, fewer cognitive capacities are available for higher-level processing (e.g., integrating inter-sentential information, making inferences, drawing upon prior knowledge) and poor comprehension is inevitable (p. 502).

Koda's definition also reflects the current trend in reading that renames the former bottom-up and top-down reading processes as *lower* and *higher-level* processes, respectively. This change in terminology also reflects the new paradigm in which parallel interaction between all processes is variable among individuals since an individual phenomena is mediated by the individual's level of proficiency in each cognitive process.

Research on automaticity, especially in L2 reading has exploded (Koda, 1989; 1992; 1994; Muljani, Koda & Moates, 1998; Chikamatsu, 1996; Horiba, 1996; Katz & Feldman, 1979). Due to the delimitations of this thesis, further discussion on this topic will be curtailed.

ii) Attention

Automaticity of individual reading processes is critical during skilled reading comprehension. In one sense, the term *attention* can be viewed as an antonym to automaticity because it indicates or describes processes in reading that require more concentration. They are not unconscious or effortless. Thurlow (1997) states,

There are then benefits of processes that operate outside our direct control. First, they place little demand on our attentional resources. Second, they work very quickly and without effort. A cognitive process that is automatic improves our capacity to handle information because we can devote attention to other tasks while that process proceeds. (p. 166)

iii) Word Recognition

...word recognition refers to the processes involved in obtaining both phonological codes (or pronunciations) and context appropriate lexical meanings from a visual display of words (Koda, 1999, p. 451).

Word recognition is currently a popular area of research since it is not only a potential indicator of automaticity in specific processes but also a determinant of successful text comprehension, particularly in L2 reading.

Without sufficient practice, word recognition and other component skills remain underdeveloped; without adequate reading, conceptual growth is seriously restricted, as well. In short, inefficient word recognition skills take long-term tolls, directly and indirectly, on the acquisition of reading proficiency (Koda, 1996, p. 451).

Many theories agree that letter recognition is the first stage and a critical foundation of skillful reading. Furthermore, renewed interest has been awakened due to the emphasis placed on the importance of the initial visual pattern (letter recognition) by connectionist theory. Research into the differences between poor and skillful readers indicate that skillful readers are able to recognize and name individual letters and letter strings more quickly and accurately (Adams, 1990; Logan, 1997; Henderson, 1981; Naslund & Smolkin, 1997; McBride-Chang & Chang, 1996). Naslund & Smolkin (1997) focus on the phonemes produced from written symbols (orthography) when discussing developments in cognitive theories of skill automatization.

The speed, accuracy, and strength of phonemic representations in decoding text is now believed to be one of the special linguistic functions that best predicts success in becoming an efficient reader (p. 147).

Lexical access is another term used to describe the end product of automaticity in word recognition. Richards (1998) cites Stanovich (1992), "Lexical access is the automatic calling up from memory of 'the word's meanings and its phonological representation (p. 4)." (p. 13). He adds, "lexical access, like word recognition, is below the level of consciousness, automatic and rapid" (pp. 13).

Numerous L2 researchers are concerned with word recognition simply because L2 readers often have a less extensive vocabulary to draw upon during reading. Moreover, they are often unfamiliar or less proficient in speaking, with the L2 syntax or grammar, and/or the cultural context reflected in the text (Carrell, Devine Eskey, 1988; Alderson & Urquhart, 1984). Word recognition, since it includes comprehension, is obviously an area of concern for L2 readers, researchers and teachers.

iv) Decoding and Meaning Making

In dealing with word recognition research, recent L2 researchers use the terms *Lower Level Processes* and *Higher Level Processes* (Koda, 1992; 1996; Henderson, 1982; Eskey 1988; Levy, 1979 quoting Massaro 1977; Clarke, 1979; Samuels & Kamil, 1984) to differentiate decoding or being able to "say" a word, and making meaning or understanding the word:

Lower-level processing refers to the processes involved in extracting visual information from print, such as letter identification and word recognition, which can be contrasted with higher-level processing, such as syntactic manipulation and inter-sentential text integration (p. 502).

Deep and Shallow Orthography

The term orthography refers to the written symbols of a particular language. English, a Romance language, uses an alphabet or Latin script, evolved over time from Roman symbols. Ukrainian, on the other hand, a Slavic language, uses Cyrillic script. The connectionist view of reading that postulates that reading processes are simultaneous, flexible and parallel within each individual reader has greatly influenced L2 reading research, particularly in the area of orthography (Koda, 1992; 1994; 1996; 1998; Horiba, 1996; Katz & Feldman, 1981; Chikamatsu, 1996; Goswami & Wimmer, 1994; Goswami, Gombert & Franc de Barrera, 1998; Romatowski, 1981).

Initially, the term *opaque* was used to describe orthographies such as English, whose spelling patterns often make pronunciation of written words unpredictable. *Transparent* orthographies, such as Ukrainian, have more stable sound-to-symbol relationships. The term 'opaque' has been transformed to the term *nontransparent*, reflecting the impact of cross-linguistic studies that indicate that transparency exists on a language continuum rather than at opposite poles (Goswami, Gombert, & Franca de Barrera, 1998).

The research on orthographic differences has given birth to the Orthographic Depth Hypothesis (ODH) "which postulates that readers adapt their processing strategies to the demands of the orthography they are reading" (Goswami, Gombert, & Franca de Barrera, 1998, pp. 20). This orthographic variation, at different stages of reading, can affect the reader's degree of involvement in phonological coding, or

more simply put, the degree of his or her reliance on the phonological processor during the reading process (Katz & Feldman, 1981; Chikamatsu, 1996).

Recent research has introduced two more terms, *shallow* and *deep* orthography. Shallow orthographies have stable sound-to-symbol correspondences. While this system makes it much easier for readers to sound out words, it can also mask a reader's level of text comprehension. Deep orthographies such as English, Hebrew, etc. "represent a deeper, morphological level of speech" (Katz and Feldman, 1981, p. 105) that often requires, for successful reading, lexical access (word recognition or knowledge of a word's meaning). This chapter has presented a brief history of reading research and the definitions of key concepts upon which the thesis is founded namely: automaticity; attention; word recognition; decoding and meaning making; and deep and shallow orthography.

Chapter 3

Methodology

During my employment with ULEC, I had done extensive library research on teaching strategies used for teaching reading in a second language (L2). I knew that either Slavic language reading research was not readily accessible or that in fact little research had been done particularly in learning to read in Ukrainian (L2). Thus, having little to build on, I knew that my research would be *exploratory*. Moreover, since there was no accumulation of descriptive data from other researchers about reading in Ukrainian to be analyzed in depth for broad trends, issues, hypothesis, principles, etc, I could not design a study with a narrow focus. That is, in addition to being clear on what I was researching, I needed to design a study that would gather a lot of details or information to accommodate for my having no idea what themes, if any, would emerge. With this in mind, the following three research questions evolved:

1. What do the early memories and impressions of junior high and high school students tell us about learning to read in a first (L1) and second language (L2) (with different orthographies)?
2. According to the students, what are the differences and similarities between first and second language reading (specifically when the two languages do not share the same orthographies)?
3. What are the specific differences and similarities in learning to read in Ukrainian as compared to English?

I could understand that little research had been done in Canada since Ukrainian is a minority language in a minority setting. However, I was surprised to find that so

little research had been done in Ukraine on Ukrainian language acquisition. Thus, educational ideas used in Ukrainian language applications have been based on research conducted in other languages, either because of similarities in language or the teaching context or a combination of the two. To add to this dilemma, as documented in the literature review, L2 reading research (Koda 1989;1992;1994; Horiba 1996; Chikamatsu 1996), via cross-linguistic studies, is still in its infancy.

Having so little to build on, especially regarding Ukrainian reading acquisition, I felt that I really was, as my ancestors before me, a pioneer. The advantage of pioneering is its excitement- you don't know what to expect and you're breaking new ground! The disadvantage is that being one of the first carries its unique responsibilities.

Asking Questions

Because this research is *exploratory* by nature, I felt a *qualitative* approach was best. Furthermore, it seemed obvious that the best way to uncover and explore early reading memories would simply be to ask people questions. Berg (1998) draws upon the work of several researchers when he states, "Usually, interviewing is defined simply as a conversation with a purpose. Specifically the purpose is to gather information." (p. 66). He describes the long *qualitative interview* as "an agile instrument with which to capture how the respondent sees and experiences the world" (p. 65). This description seemed ideal for the type of data I was looking for; how do students perceive and experience reading in two different languages with two

different orthographies. Upon securing a methodology for data collection, the next challenge was to determine what kind of questions to ask to what kind of people?

Participants

For this study, I needed the following: (1) individuals who had learned to read in two languages, English and Ukrainian, at an early age; (2) individuals who had the meta-cognitive awareness required to reflect upon their reading experiences; and (3) individuals who had the articulation skills required to clearly describe their experience and perceptions. Being a student in the Department of Secondary Education, I naturally was drawn to students in high school and junior high.

The Written Questionnaire

The questionnaire asked nineteen questions to collect demographic data. The Ukrainian community, as I remembered it from childhood, was very diverse in its mixture of language skill levels. Language use and ability were usually based on which generation you belonged to and whom you married. Immigrants, such as my grandparents and my great grandparents on my mother's side, spoke English very well, haltingly or as in my father's mother's case, none at all (despite having lived over 60 years in Canada). There were first generation Canadians who heard and spoke only Ukrainian in their homes, or heard only halting English if their parents were from varying language backgrounds. Second generation and third generation Ukrainian Canadians often spoke a version of Ukrainian, different from that of native Ukrainian speakers, or, they had either limited receptive language skills or no

Ukrainian language knowledge at all. More recently, with the downfall of the iron curtain or the Soviet communist system and an influx of "new" Ukrainian speaking visitors and immigrants to Canada, this situation or cycle is repeating itself. Once again, there are new arrivals from Ukraine, whose children who quickly achieve bilingualism, but a first generation born in Canada who is less fluent.

I felt that isolating the variables regarding varying language skill levels would be critical in the analysis of the data since this could influence the student's ability to read in each language and hence influence their perception of reading in two languages. It was also an efficient way to determine (without assuming) the student's mother tongue. Moreover, since my own memories were revealed to me over a period of time, a written questionnaire could serve the time-saving dual purpose of stirring up reading memories while providing a template or preview of the type of information to be discussed during the post-questionnaire oral interview.

Each question was repeated to probe for information about reading in both English and Ukrainian, and had one simple and direct focus. The questions aimed at stirring up memories for the oral interview, were simple closed probes eliciting yes/no responses. The remaining questions allowed for varying levels of flexibility during the response. The majority of these questions controlled the students' responses in that they offered a pre-determined checklist of answers. However, a second part to the question provided an opportunity to elaborate or write in a short response [i.e. a) What language do you speak at home with your mother? Engl __ Ukr__ Other __ b) How often? (List percentages)] Only one totally open-ended question was asked, "What do you like about being able to read and write in both

Ukrainian and English? (List 2 or 3 things if possible)". Interestingly, this is the question that received the least amount of response which validates my assumption that quick, easy responses to very focused questions, that did not require a lot of deep thought or necessitate being able to write one's thoughts down clearly, was an ideal choice for this age group (see Appendix B).

The Design of the Exploratory Oral Interview

Upon commencing the design of the questions for the oral interview, I was bombarded with various questions, thoughts and anxieties. With the accumulation of these questions and emotions came the feeling that I was experiencing the weight of the pioneer in a new land. I felt I had a responsibility and an obligation to the Ukrainian community as well as to the individual participants since I not only wanted the interview to be productive, I also wanted the experience of it to be pleasant so that future researchers would be well received. After considering my own personality and style, the Ukrainian culture, the age group of the participants, their busy schedules, the type of information I wanted and the necessity to create an open, friendly atmosphere to foster honesty and the sharing of personal information, I decided upon a combination of the following types of questions:

- indirect
- non-specific
- opinion

Tuckman (1988) writes the following:

Specific questions, like direct ones, may cause a respondent to become cautious or guarded and to give less-than-honest answers. Nonspecific

questions may lead circuitously to the desired information but with less alarm by the respondent (p. 214).

Since I was exploring a new field, conscious of my responsibilities and obligations, unsure of how the students would respond or what information they would provide, I opted for *nonspecific, indirect* questions. Respecting the fact that not everyone experiences life or recalls it, for that matter, in the same way, as well as being conscious of the possibility that a participant could be nervous or not actually be able to remember anything about reading, I decided to use a variety of types of questions that all had a similar focus. I felt that repetition of the following would unearth recurring themes or perceptions: asking about memories of reading with others, strategies employed by teachers, the advice they offered, in combination with strategies the students themselves used, as well as what advice they would give to beginner readers. Furthermore, if I included a combination of open ended as well as more focused, factual, opinion oriented questions, the interviewees would not feel pressured to provide stories or worse, feel negated because they couldn't meet my (as an older authority figure) expectations. By providing as many diverse ways as possible to contribute their memories, perceptions and opinions, I felt I would avoid these potential problems. Tuckman (1988) addresses this concern and uncovers a limitation of interviews when he discusses *fact* versus *opinion* questions:

Because the respondent may have a faulty memory or a conscious desire to create a particular impression, factual questions do not always elicit factual answers. Nor do opinion questions necessarily elicit honest opinions because, with them, distortions based on social desirability may occur; that is, respondents may reply to show themselves in the most socially acceptable light. In both forms, questionnaires and interviews may be structured and administered to minimize these sources of bias (p. 215).

Finally, these questions were asked in semistandardized interview format:

...involves the implementation of a number of predetermined questions and/or special topics. These questions are typically asked of each interviewee in a systematic and consistent order, but the interviewers are permitted (in fact expected) to probe far beyond the answers to their prepared and standardized questions (Berg, 1998, p. 70).

Since this study did not require probing "far beyond the answers" variance from the pre-determined questions occurred in three ways: (1) when seeking additional information to clarify interviewee responses; (2) when respondents offered memories or information before the question was actually asked (although I did ask the question a second time in its pre-determined order); and (3) when "chatting" or engaging in conversation through additional comments or shared memories as a strategy to create a relaxed atmosphere.

Advantages and Limitations Questionnaires and Interviews

As Tuckman (1988) mentions in the previous quote, individuals may be influenced by "social desirability". Regarding the concern of social desirability or in this case, the fear of stating something that could be perceived as negative by the teaching staff or Ukrainian community was a very real issue. One advantage I had as a researcher is that since I am not an active member in the (U) community, none of the potential candidates knew me. The participants were informed that their privacy would be protected through the use of pseudonyms and that a follow up interview would allow them to look over their transcript to ensure that the data was accurately transcribed. This would also allow them the opportunity to clarify data by making changes, additions or deletions to their comments.

Another strategy to alleviate the possibility of issues of 'social desirability' was the considerable time dedicated to explaining that I was not looking for specific results, that I was merely interested in what they had to say (i.e. to see if there were any commonalities in their responses which could potentially be useful in the future for teaching reading in either of the languages). Furthermore, during the interview, statements such as "there is no right or wrong answer" or "I'm only interested in your opinion" invited conversation about personal stories or reading events. In addition, interviews were informally held in coffee shops, in homes and as requested by some students, in the classroom after school. The researcher also dressed casually to try and off-set any power imbalance, that is, to create an atmosphere and relationship that invited the open sharing of information.

Another potential limitation of interviewing, briefly mentioned earlier, is the possibility that the interviewee may not have the vocabulary required to express themselves or for that matter, understand the questions posed to them. A major strength of the oral, face-to-face interview is the opportunity it provides for both the students and the researcher to ask for clarification or additional explanation of responses and questions from both the written questionnaire (which actually was done by several of the participants) and during the interview (Berg 1998; Tuckman 1988; Wiersma 1986).

The format of the written questionnaire allowed for rapid responses and also used very simple terms (see Appendix B). Likewise, the questions in the interview used simple vocabulary and had a single, direct focus. This modeled the expectation that responses be clear, direct opinions. In short, linguistic terminology was not required

to describe personal experiences; in fact, occasionally "lay" language more clearly described the students' processes and experiences.

As processes or activities become automatic, we often lose awareness of them. However, in general, bilinguals or individuals studying two languages have been documented as having increased meta-linguistic awareness (Gonc & Kodzopeljc, 1991). Thus, I felt confident that the bilingual participants in my study had a greater chance of being conscious of reading processes. In fact, since my seven bilingual participants were not equally proficient in two languages, I assumed that the least developed language (L2) would create a tension in them that would allow them to compare their performance in both languages. This in turn would shed light on what normally could be an unconscious process. In summary, the combination of enhanced self-reflection, L1 and L2 reading comparison, and the opportunity to ask for clarification during the interview minimized these limitations.

Of course, being a new researcher meant that I was vulnerable to making mistakes, butting in or unknowingly cutting off responses or conversation. I do feel, however that I was for the most part able to honour the participants' individual self-expression of answers and thus remain as objective as possible during the interview. McCracken (1991) suggests "the investigator serves as a kind of "instrument" in the collection and analysis of data" (p. 18). He adds, as a potential limitation of the interview process, "...the self-as-instrument process works most easily when it is used simply to search out a match in one's experience for ideas and actions that the respondent has described in the interview (p. 20)". Objectivity is, of course, difficult, especially during the interview. However, by ensuring that all the questions

were asked and taped, two things were ensured: one is that the information was accurately heard since it was recorded and transcribed; secondly, that every interviewee had the same opportunity to respond to the same questions.

Regarding data analysis of the transcripts, the issue of obtaining objectivity, whether using qualitative or quantitative instruments, remains a challenge. What one thinks is being said (or in the case of quantitative studies, what one thinks the numbers indicate) may not reflect either the isolated variables or the intentions of the interviewee. To address this limitation, follow-up contact was made to provide the interviewees with the opportunity to determine the accuracy of the transcription and to add or delete comments. After analyzing the transcripts, the major themes discussed in this thesis, are repeated by the students collectively as well as repeatedly throughout their individual interviews rendering mis-analysis difficult.

Finally, when dealing with human beings and memories, there is always the danger of ~~inaccurate~~ reconstruction of events or perceptions. After all, teenagers are pulling out of long-term memory their reading memories from when they were very young children. In spite of this, simple memories, so vividly described, support the themes derived from the variety of focused and opinion-oriented questions.

The Interview Schedule

The interview schedule had seven steps:

1. First Introduction Letter
2. Letter of Introduction/Consent Forms (Appendices A)
3. In-School Information Session
4. Pilot Test
5. Written Questionnaire (Appendices B)
6. Oral Interview (Appendices C)

7. Follow up after transcribing oral interview data

A letter introducing the research was distributed to the parents through the school prior to the Christmas break. In January, upon returning to school, the students were given another letter of introduction and consent form (see Appendix A) that included a detailed explanation of the purpose of the research, privacy concerns, time commitments, voluntary participation and the option to withdraw at any time without repercussions. This letter was distributed during a 10-minute information and question session held by the researcher in the school. During this session, the researcher told her own memory of writing her name on the board as a seven year old child to not only model for the students a possible response, but also to dispel fear of the unknown and possibly stir the student's own memories.

A pilot test for both the written questionnaire and oral interview was administered to a 15 year old male studying German (L2). After this was successfully completed, the researcher returned to the school the following week to collect consent forms from interested parties. The written questionnaire was then given to the seven volunteers to be completed and returned at the oral interview. This interview was scheduled at the convenience of the participant.

At the beginning of the interview, the written questionnaires and the consent forms were collected. The written questionnaire was designed to gather demographic information. In two cases a student filled out the written form immediately before the interview. The oral interviews were held and recorded within a three-week time period; two after Saturday school in a classroom, one in a participant's home, and four in coffee shops. The interviews were informal, fairly relaxed and ranged from

35 – 90 minutes. The questions for the oral survey were all asked; however, if memories were not obtained from questions about reading, the researcher would either re-ask the question at the end of the interview or immediately expand and re-ask the question by adding 'reading or writing'. For example, if the question "Tell me about when you were first learning to read in English" did not elicit a response, the question would be changed to 'How about when you were first learning to read or write in English, what do you remember?'. This tactic always initiated dialogue and comments, which eventually led to comments on reading. Even if all the questions were answered, the first two questions regarding early memories of reading in (E) or (U) was repeated at the end of the interview to determine if additional memories had been awakened. All interviews were conducted in English.

The recorded interviews were transcribed by the researcher within 6 weeks and then returned for comments to the participants, seven months later. Three participants requested their transcripts via email, three were hand delivered to the school and one was sent through the mail.

Ethics

Ethics approval was given after the researcher submitted the introduction to the research letter, the school principal's approval, participant and parent consent forms, the written questionnaire, the questions for the oral interview and a schedule or timetable for the research. All conditions required by the Ethics committee have been honoured.

The Written Questionnaire

i) First Language memory versus Mother Tongue

After listening to the tapes of the interviews, I noticed some discrepancies in the understanding of the terms "first language", "mother tongue" and "dominant language usage". During the oral interviews, the two participants born in Ukraine claimed that the first language they spoke was Ukrainian and their second language was English. Interestingly, four out of the five remaining participants, born in North America (4- Canada, 1- United States), also claim that their first language was Ukrainian; however, all note that they do not presently perceive themselves as speaking or reading it frequently or well. One comments on not being able to read as well in Ukrainian but says nothing about oral proficiency. The remaining four participants correlate self-perceived oral deficiencies in Ukrainian with infrequent usage or opportunities to speak, inefficient or restricted grammar skills, lack of access to and low levels of vocabulary knowledge, simple use of the language (meaning little use of "big" words or complex vocabulary), and difficulties in expressing themselves effectively. Two of the five North American born students and both of the students born in Ukraine comment only briefly on vocabulary building techniques in English; however, they do not comment on the other previously mentioned items.

In the written questionnaire, when asked about the language in which they first read, one participant claims English, two claim "both at the same time" and four (includes the two participants born in Ukraine) claim Ukrainian. Upon contrasting the information collected from two other categories, language spoken in the home

with relatives and peers (percentage of Ukrainian versus English), as well as the students' current self evaluation of their speaking and reading ability in both languages, the researcher has made a distinction between the *memory* of the *first* language spoken and the actual *dominant* language used.

The term, "*first* language" suggests mother tongue, however the memory of speaking or reading Ukrainian first does not directly translate to Ukrainian being the student's mother tongue (UL1) or dominant language. Thus, the dominant language means mother tongue or L1 and may not necessarily be the first language remembered. In this study, only the two students born in Ukraine will be considered to have UL1 as a dominant language or mother tongue. Both Slawka and Metro are able to fully express themselves without hesitation in English and have both been a successful part of the mainstream Canadian school system for a minimum of 5 years. A very slight accent is noticeable in one of the students.

The remaining five North American students will be classified as having knowledge of Ukrainian, however due to the limitations of this study, it is impossible to determine to what degree. Based on the accumulation of information on the language used predominantly by the surrounding culture, the information given by the students as to the language used in the home, with relatives, and peers, their self-evaluation of reading and speaking proficiency, as well as the voiced comfort level when communicating in one language compared with the other, the participants have been divided into the following categories;

- English (EL1) and Ukrainian (UL2)- five participants
- Ukrainian (UL1) and English (EL2)- two participants

ii) Gender and ages

Seven students, four females and three males participated in the study. The age distribution is as follows:

Ages	Females	Males
14 years	1	0
15 years	1	2
16 years	2	1

Figure Four - (Chart 1)

ii) Country of Birth

Four participants were born in Canada, one in the United States and two in Ukraine.

Those born in Ukraine arrived in Canada 5 and 7 years prior to this study.

iii) Where and with Whom Languages are Spoken

English appears to be the dominant language in four of the English (L1) homes, while Ukrainian [2- Ukr. (L1) and 1- Ukr (L2)] remains dominant in two of the households and only slightly dominant in one household.

iv) Individual Profiles

Anastasia

Anastasia, born in Canada, is a lively 16 year old female whose dominant language is English (EL1). She estimates that she speaks 70% English (E) in her home with her parents, 80% (E) with her siblings and 90 – 100% Ukrainian (U) with her relatives and grandparents. She believes (U) was her first language and has early memories of not only first reading in (U) but also of being able to read (U) better than English. She also has very vivid and pleasant memories of stories told to her in (U) by her *baba* (Ukrainian word for grandmother). Anastasia studied in the Ukrainian Bilingual Program from kindergarten to Grade 7. She currently considers herself to be much more proficient in both speaking and reading in (E) as compared to (U) due to increased frequency of use.

Irena

Irena, born in the United States, is a very articulate 14 year old female whose dominant language is English. She has been studying Ukrainian in school since pre-school, however has been formally enrolled in the Ukrainian Bilingual Program for six years. She believes that she speaks 75% (E) with her mother, 98% (E) with her father, 100% (E) with her siblings, 50 % (E) with her relatives and 85% (U) with her grandparents. Irena loves to read in her dominant language, (E) and expresses a lot of anxiety regarding reading, especially out loud in Ukrainian. She also believes that Ukrainian was the first language she spoke and has vivid, very early memories of reading, particularly in English, with her family and friends. She also attributes much of her reading success and motivation (in both languages) to her family, friends and relatives.

Yalena

Yalena, born in Canada, is a shy 15 year old female whose dominant language is English. She has been in the Ukrainian Bilingual Program since kindergarten, for a total of ten years. She estimates that she speaks 60 % Ukrainian with her parents, 20% with her siblings, 100% with her grandparents and 50% with her relatives. She believes she started reading both languages at the same time, however, at present, she gets very nervous when reading (U) out loud, especially when faces with "big" or long words. She finds reading dialogues in (U) easier to understand than reading whole paragraphs. She doesn't have problems when reading English.

Slawka

Slawka, born in Ukraine, is a meta-cognitively aware, lively 16 year old who appears to be equally proficient in both (E) and (U). She arrived in Canada seven years ago and has been enrolled in the Ukrainian Bilingual Program for 5 or 6 years. She began school full time in Canada, in English, in grade 4. She has a vivid memory of being excited and pretending to speak (E) in front

of a mirror because she knew she was moving to Canada. Otherwise, she has only one vague memory of studying (E) in Ukraine. Also from Ukraine, she has pleasant, vivid memories of a (U) book with a fatherly tree and fairies (pre-school years) and some disturbing memories around reading in school in Ukraine. She thinks that her mother speaks 98% (U) to her, however, Slawka says that she answers and speaks 98% (E) to her mother.

Vasel

Vasel, born in Canada, is a very meta-cognitively aware, articulate, 15 year old male. He has been in the Ukrainian Bilingual Program for 10 years, commencing in grade 1. He estimates that he speaks 60% (U) with his mother, 20 % (U) with his father, 100 % (E) with his sibling, 85% (U) with his grandparents and 50% (U) with his relatives. He says he is an avid reader in English, however, finds that having to slow down when reading (U) very frustrating.

Bohdan

Bohdan, born in Canada, is a lively 16 year old who has been studying Ukrainian for 10 years, commencing in kindergarten. He also remembers Ukrainian from playschool. His dominant language is English, and although proficient in (U), feels that he chooses "simple" words and phrases that he can pronounce and is sure of when he speaks. He feels he reads much slower in Ukrainian. He estimates that he speaks (E) 60% of the time with his mother, 50% with his father, 90% with his siblings. With his grandparents, he speaks 100% (U) and with his other relatives, 80% (U).

Metro

Metro, born in Ukraine, is a shy 15 year old male who came to Canada 5 years ago. He has been enrolled in the Ukrainian Bilingual Program for five years, however started studying his second language, English (EL2) in grade one in Ukraine. This was in an English as a Foreign Language (EFL) classroom situation with a teacher (EL2) born in Ukraine. He estimates that he speaks (U), 99% of the time with his mother, 100% with his father, 99% with his siblings, 100% with his grandparents and relatives. Taras has vivid early memories of his *dido* ((U) word for grandfather) telling him stories of *kozakea* (Ukrainian warriors on horseback) as well as early attempts to teach him Cyrillic script (U). He also has vivid memories of his teacher speaking English in the classroom, when he was first introduced to the English language. Metro has a very slight, barely discernable accent.

Limitations of this Study

During data analysis it became clear that one limitation of this study is the students' general unfamiliarity with linguistic terminology or vocabulary to describe the reading process. In most cases, although not all, it is intuitively obvious what is being referred to and will be clarified by the researcher when necessary. For example, there appears to be some confusion as to the definition of reading or what reading is. Some participants view reading as the ability to sound out words successfully, irrespective of comprehension, while for others articulation as well as the comprehension of the text constitutes "successful" reading. These beliefs will also be highlighted during data analysis when necessary.

As a researcher I will use my own discretion and judgment in the analysis of reported data to determine to what the student is referring. This decision will be supported in three ways: by the student's individual statements; via a cross-reference with the information provided in the written questionnaire; and within the context of the entire oral interview.

Careful attention has been paid to distinguish between what students were told about reading, what they were taught, what they perceive themselves as doing, and what they personally find useful. The variety of questions asked during the oral interview clearly delineates these differences and for the most part, avoids possible confusion. Unfortunately, due to time constraints and the narrowing of the focus of this study, all of this data is not reported in this thesis.

Chapter 4

Study Analysis

Thus, novice performance may be slow, effortful, deliberate, and conscious, and highly practiced performance may be fast, effortful, autonomous, and unconscious. However, performance after an intermediate amount of practice may be somewhat fast, somewhat effortful, somewhat autonomous, and partially conscious (Logan, 1997, p. 128).

Overview of the Study Questions

A written questionnaire gathering demographic data was administered to the participants prior to their being interviewed. In the oral interview that followed, the students were asked questions about both English (E) and Ukrainian (U) reading in the following broad areas:

- early memories of learning to read in the home and in school
- helpful strategies learned and used in reading (past and present)
- recommendations to students who are beginner readers
- recommendations for teachers teaching readers
- self-perception/assessment of former and ongoing problems in their L1 and L2 reading
- preferred reading material (genres, stories, etc.)
- opinions of differences between reading in Ukrainian and English

From the participants' answers to these questions, it became clear that automaticity accounted for differences in their ability to read in the two languages.

General Comments

Two general comments summarize their responses to the interview questions.

- Ukrainian appears to be easier in the initial stages of learning or during the first stages of decoding; however, after gaining comfort with decoding, lack of vocabulary knowledge is a major obstacle to text comprehension for L2 Ukrainian readers.
- Although rated as much more difficult in the initial stages of reading due to its orthography, at present the participants consider themselves to be proficient readers of English. Spelling, however, remains a concern.

The Contradiction

These two statements appear to be paradoxical. While all seven [five English L1 (EL1) and two Ukrainian L1 (UL1)] interviewees agree that although learning to read in English was confusing and difficult, they consider themselves skillful readers of English. Conversely, although the five Ukrainian L2 (UL2) readers claim that learning to read in Ukrainian (decoding) was and is easy, they simultaneously claim that they have difficulty reading it at present. The two UL1 learners claim that, although (E) spelling remains a concern, they currently do not have difficulty reading in either Ukrainian or English. In other words, decoding appears to have been more difficult at certain stages in (E) as compared to (U) for both L1 and L2 readers. Comprehension was, and still remains, a challenge for UL2 readers. The five UL2 readers present this paradox in the following manner.

Bohdan- Yeah, and it was just easy because that's all I spoke and there was just books everywhere and it just came really easily, easy, started reading Ukrainian before I went to school...
 ...I read a lot faster in English. Just like I used to be way better in Ukrainian. I don't know how I lost it but now I can't speak or understand as much as I used to in grade one... Ukrainian you kind of have to read it slowly and think

about most of the words. But spelling, both of them are about equal. I can do both just as fast but reading Ukrainian for sure takes a lot longer.

Vasel- And that to read in Ukrainian, because it's a phonetic language, it's really easy to read but you have to know your sounds... Reading in Ukrainian has always been for me a really awful thing because of the... I concentrate so much on the reading that I can't understand the words...

...So in Ukrainian you would break it down in to those sounds. It helped me to read the words 'cause I would like to rush through it cause in English I could be like zip, zip, zip. In Ukrainian, you had to slow down. I really didn't like that. Because my English was always better and I didn't like slowing down for Ukrainian. And so it was, it helped me, yeah, it helped me read but understanding it, no.

Irena- And it's pretty easy to read because you just sound it out and it sounds almost exactly like it's written...when you start Ukrainian, you just want to quit because it's kinda hard unless you've grown up with it for awhile...And yeah, it's kinda frustrating. It's very frustrating actually. But some of it starts to make sense. There are some words that kind of sound the same, that kind of almost look the same in Ukrainian as in English, and it's just that if you really want to read Ukrainian, then work at it really hard.

Yalena- Well, in Ukrainian I think it's easier because if you don't know a word you can just sound it out really slowly. But in English you have all those rules and it's harder. Like 'ph's and like an 'f'...

...In English...And reading is not so bad because I've read for so long now...I don't read as much in Ukrainian as English...Ukrainian just like when I read out loud sometimes I get nervous because the words are so big and I'm like, uuuhhhhhhhh!

Anastasia- It was harder to learn [to read] English because I knew Ukrainian first. And English, it's a harder language to learn because there's letters like 'ph's that sound like 'f's and Ukrainian, everything's just so straight forward and you know what sounds are in which words or whatever...

... 'cause you have these really big words, really long ones in Ukrainian that you're reading. Sometimes I have to read those slower than I have to read other words...there's nothing you can do about that unless you read the language every day...There's millions of word that I don't even know in Ukrainian because, I don't know, I don't use big words. There's no need for me to...I spoke better when I was younger...it gets harder and harder.

How can Ukrainian (U) reading be easy one moment and difficult the next? Some students are saying UL2 reading was easier in the past than it is now, while others

are claiming it is simultaneously easy, yet difficult. Why is English (E) considered difficult to learn to read yet, at present, everyone considers themselves to be proficient (E) readers, irrespective of it being an L1 or L2?

Two factors influence their comments. First, students use one term "reading" to describe both "decoding" and "comprehension" or in Koda's terms, lower-level processing. Second, those who currently experience ease reading in a SL have had a lot of exposure to oral and written language in a multitude of authentic or natural settings (i.e. as immigrants surrounded by English or as children surrounded by a society that functions in that language- either Ukrainian in Ukraine or English in Canada).

Written Questionnaire

On the questionnaire the students were asked their opinion of how much they enjoyed reading "now", in "grade 5" and in "grade 1" in both Ukrainian and English via a graded Likert scale. Five choices per category (grade 1, 5 and now) were provided; I loved reading; I like reading; I liked reading sometimes; I read only when I had to; I didn't like reading at all; I don't remember (refer to chart 2).

For English reading, three participants chose "I love reading", two of these kept this choice for all three time frames, while the remaining student kept the choice for 'grade 5' but downgraded to "I like reading" in the 'now' category. One student did not learn to read EL2 in grade 1, however for 'grade 5' and 'now', checked off "I love reading". The remaining two students upgraded their original assessment of their enjoyment of reading in English. One didn't remember reading EL2 in 'grade

1', however, "liked reading sometimes" in 'grade 5', and "likes reading" 'now' in EL2. The other student "liked reading sometimes" in grade 1, and then upgraded in both 'grade 5' and 'now' to "I like reading" (see Chart 3). In other words, despite the challenges posed by reading in Ukrainian, students' enjoyment of reading seems to carry them through. It would be interesting to hear students who do not like to read describe their reading experiences in a SL⁸.

Overall, four students remained constant in their choice of reading in (E) while one showed a slight increase in reading enjoyment from 'grade 1'. Out of the remaining two students, one shows a constant, one category downward shift from 'grade 1' to 'now' (from "I loved" to "liked" to "like sometimes"). The other "loved" reading in 'grade 1' and 'grade 5', however, 'now', drops one level to "likes".

For Ukrainian, in 'grade one', two students checked off, "I loved reading", three indicated "I liked reading" and two checked off, "I didn't like reading at all". One of the three students who "liked" reading, made the same choice for 'grade 5' and 'now'. The other two, show a consistent downward shift, in 'grade 5' to "liked sometimes" to, in the 'now' category, "like sometimes" and "read only when I have to".

⁸ Furthermore, it would be interesting to explore the role that types of texts play in nurturing students' desire to read.

(Chart 2)

English				Ukrainian			
ENG.	Grade 1	Grade 5	Now	UKR.	Grade 1	Grade 5	Now
I loved reading (r)	4	4	3	I loved reading (r)	2	-	-
I liked reading	-	2	3	I liked reading	3	2	2
liked (r) sometimes	1	1	1	liked (r) sometimes	-	3	2
read only when I had to				read only when I had to	-	1	3
didn't like (r) at all				didn't like (r) at all	2	1	-
don't remember	1			don't remember			
didn't read (E)	1			didn't read (U)			

What is apparent from the data in this table is that overall, English is rated as more enjoyable to read than Ukrainian. It seems reasonable therefore, to hypothesize that based on the high percentage of students who chose the top two levels for (E) reading, that students are also proficient in (E). Conversely, reading proficiency in (U) is not as clear or straightforward. One can say, however, that reading is rated as less popular in (U) since more participants made less positive choices compared to (E), despite in two instances, (E) is the L2. When viewed holistically, the responses show a consistent downward trend in enjoyment of (U) reading. This also correlates with the earlier contention that, over time, (U) reading increasingly became and is, at present, perceived as more difficult to read.

Automaticity Reading Criteria

If the student is a skilled reader, multiple tasks are being performed at the same time, such as decoding the words, comprehending the information, relating the information to prior knowledge of the subject matter, making inferences, and evaluating the information's usefulness to a report he or she is writing (Samuels and Flor, 1997, p. 108).

Automaticity is essential in skillful reading. For the purpose of this study, Logan's (1997) criteria will be used to define and measure reading automaticity. Logan describes these four criteria as;

- 1) speed defined by reader reaction time
- 2) effortlessness, meaning the ease with which one can perform the task or the ability to perform more than one task at a time (for example, driving and talking and smoking a cigarette)
- 3) unconsciousness (of the reading process) in that automatic processing is not available to consciousness.
- 4) autonomy or the idea that something is functioning without intention (examples are given of the Stroop Effect (1935), a phenomena in which subjects cannot inhibit themselves from reading or determining the meaning of certain words (i.e. word comprehension).

Automaticity occurs in both higher-level and lower-level reading processes.

Higher-level processes, according to Koda (1992), include "syntactic manipulation and inter-sentential text integration" (p. 502). This knowledge of grammar in combination with the reader's schemata based on her/his cultural and background knowledge facilitates text meaning reconstruction (Eskey, 1988). However, for the purpose of this study, only lower-level processes that include letter recognition, letter combinations, spelling patterns and word recognition (assumes word comprehension) will be explored in depth. Word recognition will be divided into two sub-categories, decoding skills (defined as recognition of letters, letter combinations, spelling

patterns and finally whole words) and vocabulary knowledge (comprehension of the word's meaning).

i) Reading Speed

All five EL1 speakers are conscious of the fact that their reading speed rate is slower in UL2 than in EL1.

Bohdan- ...I read a lot faster in English. Just like I used to be way better in Ukrainian.

VASEL- In Ukrainian, you had to slow down. I really didn't like that. Because my English was always better and I didn't like slowing down for Ukrainian.

Anastasia-... 'cause you have these really big words, really long ones in Ukrainian that you're reading. Sometimes I have to read those slower... But other than that... there's nothing you can do about that unless you read the language every day...

Irena- I was a bit slow in Ukrainian, a lot slower than I was in English, I think... well, now I find English way easier than Ukrainian... I notice, I like, I'm very hesitant on saying everything [referring to oral reading].

Yalena- Well, I don't read as much in Ukrainian as English... In English... And reading is not so bad because I've read for so long now... Ukrainian just like when I read out loud sometimes I get nervous because the words are so big and I'm like, uuuhhhhhhh!

Bohdan, Vasel and Anastasia, directly state that they need to slow down when reading UL2. Irena makes this comment about past and present UL2 reading throughout her interview. Her direct comparison to oral reading however, insinuates that she is describing slower reading. Yalena's statements do not specifically mention reading speed. They only refer to her frequency of use or exposure and as in Irena's case, her difficulty with oral reading. Again, we can assume that if she is

having difficulty reading the long words in UL2, rate of reading is being negatively affected.

It should further be noted that if cross-referenced with data collected from the written survey, all seven participants identify (E) spelling as an issue, but not (E) reading. Although without empirical testing, we cannot verify (E) and (U) reading speed, (which is a limitation of this study), we can hypothesize that the students have achieved automaticity in lower level (E) reading processes!

Interestingly, the two EL2 readers, Slawka and Metro, both refer to reading speed only in the context of UL1 exercises or speed-reading drills required in the school system in Ukraine. They do not distinguish a difference in their overall ability or reading speed in either their UL1 or EL2. Slawka comments on how difficult it was in grade four to learn to read English. However, in the written questionnaire, she indicated that she "loves" to read in EL2, two levels higher than "like reading sometimes" in her UL1. Metro gives advice on how to read faster in Ukrainian; however, he does not comment on his own current reading performance in either language.

These comments could be a reflection of the difference between using and being immersed in an EL2 in an (E) dominant society versus studying a foreign language or UL2 in an EL1 dominant environment. In fact, it is impossible to be immersed in Ukrainian in Canada and use it all day long, every day unless you are under the age of two or work in an immigrant setting (with same language speakers) such as a bakery, factory, etc. Perhaps then, because Slawka and Metro have, from young ages over a period of five to seven years, been immersed in and therefore, daily and

frequently use EL2, these two students do not perceive themselves as having major difficulties in EL2 reading. Since these students have been a part of the mainstream school system in Canada for over 5 years, it seems likely that via feedback from school performance, they would be conscious of difficulties in (E) reading. We can also hypothesize that the absence of stated difficulties in UL1 reading is a reflection that both students had achieved an acceptable level of automaticity in UL1 reading in Ukraine before immigrating to Canada. As native speakers of a language with a shallow orthography, this is not surprising.

It appears then that automaticity, specifically in reading speed, is a present concern for those reading UL2, a minority language in a dominant English (L1) environment. Further study is needed, particularly future research that investigates the hypothesis presented in this section regarding reading speed and automaticity.

ii) Effortlessness

Logan (1997) lists *effortlessness* as another condition of automaticity in reading. When does reading cease to be effortful and begin to be effortless? Many reading researchers use measures of reading speed and text comprehension to determine the overall amount of effort required to read or conversely, to measure the overall amount of automaticity possessed by the reader. This is often accomplished through a combination of timed silent reading followed by measures of comprehension via questionnaires, close comprehension tests or written or oral text retelling. Miscue analysis studies record various participant errors during read aloud tests. These methods have been popular in measuring reading because they allow the researcher

to analyze errors and postulate as to the amount of automaticity involved in specific reading processes (syntactic control, sound-to-symbol accuracy, use of context, etc.).

In this study, the amount of effort required in both (E) and (U) reading is measured by students' self-perceptions. I will argue that the students' self-evaluations are a valid and accurate means of highlighting areas that need further attention or additional skill development. Logan (1997) argues,

Automaticity is viewed by many as a continuum rather than a dichotomy so that one process may be more automatic than another but less automatic than a third...and it may be that different properties change at different rates (p. 128).

If Logan's statement is accurate, then the information provided by the students about their own processes is more than sufficient evidence for increased automaticity development or conversely, by omission, that areas have already been automatized.

As a collective, using their responses to the open-ended questions, this group has similar awareness of areas of reading that require effort. First of all, a large majority of these collective evaluations surround differences between (U) and (E) orthography or written symbols. These will be discussed in terms of *orthographic transparency* and then will be further sub-categorized and analyzed as: long words, articulation and syllable stress and finally, spelling. Although a correlation between spelling and reading performance has not been established and is out of the scope of this thesis, students' comments will be documented not only to provide information for further research, but also to reinforce evidence of differences in (E) and (U) orthographic transparency.

ii-a) Transparent and Nontransparent Orthography

A significant recurrent theme, voiced in the oral interviews by six out of the seven participants, irrespective of their L1 or L2, is the *transparency* of Ukrainian orthography or the consistency (for the most part) of its sound-to-symbol relationships. When these participants mention how "easy" (U) is to read, they appear to describe the very early decoding stages of beginning reading, and not text comprehension.

Anastasia- ...and Ukrainian, everything's just so straight-forward and you know what sounds are in which words or whatever... 'cause whatever letter there is, that's the sound it is.

Irena- you just sound it out and it sounds almost exactly like it's written...

Vasel- it's a phonetic language, it's really easy to read but you have to know your sounds...so the biggest word in the world, even if it takes you, you know, 5 minutes to read in Ukrainian, you can break it down in, you know, 5 groups of 2 letters groups you've learned... So in Ukrainian you would break it down into those sounds. It helped me to read words...but understanding it, no.

Slawka- because Ukrainian, what you see is what you read. It's just, there's no special you know, you don't lose sounds, you don't add any. Whatever you see, that's how you read it. In English it's confusing.
...[re: (U)] It's really easy...yeah, that's the tricky part. You can read but you don't really understand what you're reading.

Metro- Well, Ukrainian isn't like English, it's kind of what you write is like what you read...

Yalena- Well, first we had to learn the alphabet really good so we could know what the letters were. And then it was easier to read because you could just sound out the word, not like English, how there's some weird letters and stuff...There's no two letters together that will make a funny, I don't know, a different sound, you know what I'm saying?

The seventh participant, Bohdan, does not comment directly on the nature of either (U) or (E) orthography⁹.

The students' perceptions support several previous empirical studies.

Romatowski's (1981) miscue analysis of Polish reading, a Slavic language similar to Ukrainian, also considered to have a transparent orthography (although not Cyrillic script) found "the high sound/symbol relationship in Polish and the group's apparent awareness of this linguistic feature was evident and influenced the reading" (p. 24).

Interestingly, Romatowski's Polish L1 fifth graders who had the fewest miscues (errors during reading out loud) also had the lowest text retelling scores, further proof that fluent reading in a shallow orthography does not necessarily mean the reader is comprehending the text. Katz and Feldman (1981) discovered that readers were more efficient in and better able to access phonological information when reading Serbo-Croatian orthography, a *shallow* orthography (Cyrillic script) than did readers of English (*deep* orthography) who needed greater access to context or word meaning in order to determine the sounds of select symbols.

About the nontransparent orthography of English, these high school students said:

Slawka- [re: EL2]...It was really hard...

Researcher-...Do you remember what specifically was hard about it [EL2]?

Slawka- Oh, the 'ght' stuff. The 'thought' and the 'through' and stuff. I couldn't get the concept of it. I couldn't, 'daughter'. I don't know, I thought it was a weird spelling...Just pretty much how to pronounce, like vowels and stuff, of which, is it an /ee/ or an /e/ or how to pronounce the words.

⁹ Shallow orthographies such as Ukrainian have stable sound-to-symbol correspondences. While this system makes it much easier for readers to sound out words, it can also mask a reader's level of text comprehension. Deep orthographies such as English, Hebrew, etc. "represent a deeper, morphological level of speech" (Katz and Feldman, 1981, p. 105) that often requires, for successful reading, lexical access (word recognition or knowledge of a word's meaning).

Yalena- [EL1] Well, in Ukrainian, I think it's easier because if you don't know a word, you can just sound it out really slowly. But in English you have all those rules and it's harder. Like 'ph's, like an 'f'.

Irena- [EL1] ...it took me awhile to sound some of the words out. But it was, I still kind of rewarded myself after I got through the big words like, I don't know, 'museum' or something.

Anastasia- [EL1] And English it's a harder language to learn because there's letters like 'ph's that sound like 'f's...

Metro- [EL2] in English, the spelling, you read one thing and you write completely another.

Vasel, who considers himself an avid reader in English, makes an intriguing assessment of the nontransparency of English orthography.

Vasel- [EL1] I don't even know where the problem came from but I pronounce some words, in uh, in a totally different manner in which they're supposed to be spoken. And for lack of reading out loud in class, in school, at home, I have like, some words, like 'youishin'. Do you know what that is? Exactly! 'Youishin' is not a word. It's 'unison'... Some words from lack of reading out loud, I have totally mispronounced and I won't find them out until I ask them or write them down.

Although it appears he is referring to use of context or higher process skills to facilitate reading comprehension, the comment also implies that the spelling patterns in the word may not easily be converted to its oral or auditory representation.

ii-b) English Spelling

Writing and speaking are productive skills while reading and listening are receptive skills. While writing requires accuracy in spelling, reading does not. Having said this, it is not within the scope of this thesis to discuss possible relationships between spelling and reading; however it is worthwhile to document

the numerous participant comments about the nature of (U) and (E) spelling for future research use and for additional, specific evidence of orthography transparency.

It should be noted that the need to mention reading and writing in the interviews, in an attempt to bring reading memories into consciousness, seems to have facilitated this plethora of information.

Bohdan- [EL1] Uh, yup. Some things...it's like one or two words that I always misspell or mis- say it wrong. Just over and over again...just little things...the 'e' and the 'i', like the word friend or beautiful. That's one word, I don't know how many times I checked it, and I always misspell it.

Metro- [EL2] ..usually the spelling.

Researcher- In which language, both or...?

Metro- More in English. In Ukrainian, you read, you write, you talk, and it's more the same. In English, the spelling, you read one thing and you write completely another one.

Slawka- [EL2] Oh, the 'ght' stuff. The thought and the through and stuff. I couldn't get the concept of it. I couldn't. 'daughter', how you spelled 'daughter'. I don't know, I thought it was a weird spelling...yeah, to this day, I still get confused. I mean just, how to pronounce things properly because Ukrainian, what you see is what you read... 'ghost' and 'goats'. I just cannot get it...but just for the last couple of years, I've always had trouble spelling it like, 'doughnut', 'dough' and 'doubt'.

Irena- [EL1] I can never remember how to spell, uh, 'pieces' and um, some other words. It's just like, in the case of 'i' before 'e' except after 'c'. those things. I still have trouble with them and, that's, oh, and 'symmetrical' and 'deficient'. And I can never, I can never spell those. It's really weird. Yeah, I don't really have any problems with reading in English.

Yalena- [EL1] I'm not a very good speller so spelling it would be for me. And reading is not so bad because I've read for so long now.

Anastasia- [EL1] Or sometimes in some word like the 's's' and the 's's'. Like 'conscience', like sometimes I don't know how to spell that, you know? ...teach the letters of two sounds combined...and silent letters and things like that...Um, they would tell us that 'q' and 'u' always go together... like the sound of which two letters together can make, like 'sh' and 'ph' so...

Vasel...even now, I find if I haven't been reading, I wasn't, I had gone through a stretch where I hadn't read a lot of books and my spelling became

confused. I guess I rely a lot on books now to refresh my mind, the spelling of a word.

ii-c) Ukrainian Spelling

From the above, one might conclude that spelling in Ukrainian would be quite straight forward. However, despite the consistency of (U) sound-symbol relationships, some students indicate they still have problems with (U) spelling. For example, Bohdan says that (U) and (E) "spelling, both of them are about the same". It appears then, that Ukrainian is not as transparent as it seems, particularly when it comes to the use of *myakij znak*, distinguishing between 'u' and 'e', individual (U) letters that appear to incorporate two (E) sounds (i.e. /ts/, /sh/, /you/, /yah/ etc.) and word endings. Regarding specifics, Bohdan, Vasel (EL1) and Slawka (E L2) express confusion with (U) word endings, speaker variation in articulating sounds and its resulting interference with spelling.

Bohdan- [UL2] ...oh, when to put different letters for Ukrainian, like *myakij znak* and for all those numbers going up. I didn't know when to make a soft ending...

Vasel- [UL2]...the 'i', 'you' endings like 'nuu'...Like in Ukrainian the sounds kind of depends on the speaker for some areas. And the sound can be like there are so many similar sounds like 'e' and 'yea'...

Slawka- [UL1]...the only thing I can think of in Ukrainian that I think should be explained more or there should be some kind of rules or something, is the whole, if you put an 'e' or an 'u'...just when you speak you can say either 'u' or 'e'. Like nobody can really pick up on it. But when you write it down, even now in Ukrainian, that's the only thing I really have trouble with.

Vasel, Bohdan and Slawka express difficulty remembering letter combinations in (U) word endings. Vasel and Slawka also distinguish either past or present confusion in

recognizing if a letter is one symbol that contains a combination of two sounds or two separate, individual symbols.

Vasel- [UL2] *spalnya*, a word that was just pretty simple and then the ending would be...you'd be putting letters together to try and write it out to match that sound...Yeah, but I remember it, just not being able to find the letters for the ending of the word. I just couldn't put it together. That was always a problem for me...I would just think of the sounds rather than the letters first. If I was younger now, I would think of the letters now, rather than the sounds.

Vasel- I found just the sounds, the letters, know what they are. And to read in Ukrainian, you have to really know the combinations. Like 'l' and *myakij znak*. It makes, you know, a softer sound...then the endings...there's some letters that all they do is affect in the sound.

Slawka- [UL1] Spelling's not a big thing, it's just, the whole, like *zanyat*, not wait, like the right sound 'tsya' at the end of the word, like at the end of a word, people usually, like in grade 1, you put a 't' and a 'ya' instead of a 'ts', *myakij znak* and a 'ya'. So just remembering that. Memorization.

Bohdan- [UL2] ...when to put different letters for Ukrainian, like *myakij znak* and for all those numbers going up. I didn't know when to make a soft ending so...

All three participants refer to *myakij znak*, a silent symbol that affects or softens the preceding consonant in a word. Vasel, in other parts of his interview, makes specific reference to two similar sounding symbols, 'sh' and 'shch' as well as 's' and 'ts'. He also expresses this from a different angle in the following statement.

Vasel- ...[re: UL2 spelling]...words that, which I don't know, I'll put in more sounds, more complicated than it is. And that's because I get kind of paranoid that I'm missing a sound or something of the sort.

All of these examples were offered without prompts or requests (i.e. interview questions that asked for these details). They were offered when the students were

asked if they had any ongoing problems when reading (U) and also, when asked what they thought the differences were between reading in (U) and (E).

ii-d) Effortlessness in Reading Ukrainian versus English Orthography

As we have already seen, the five UL2 and two UL1 students have effectively described their perception of differences in reading in Ukrainian compared to English; that is, Ukrainian was easier in the early grapheme-phoneme stage of decoding compared to this stage of reading in English. This appears to be a direct reflection of the nontransparent nature of Ukrainian orthography. However, increased effort is required when reading sentences or whole words, as described in the previous section on reading speed section and as will be described in upcoming sections. Even though the interviewees consider themselves to have no ongoing orthographic reading difficulties in English, five students comment on the challenge and effort involved with grapheme-phoneme translations when they first began reading in (E).

Slawka- [EL2] It was really hard...Just pretty much how to pronounce, like vowels and stuff.

Irena- [EL1] I would kind of, and it took me awhile to sound some of the words out...But it was, I still kind of rewarded myself after I got through the big words, like, I don't know, 'museum' or something.

Anastasia- [EL1] And English it's a harder language to learn because there's letters like 'ph's that sound like 'f's...yeah, I remember really having to sound out words and stuff...it was just so much, it took me longer to read something in English than it did in Ukrainian [opposite of today].

Yalena- [EL1] Well, I remember trying to sound out the words as best as I could and I couldn't get some of the words so I would ask the teacher to read it for me...[re: early memories] Well, not enjoyable moments but like

embarrassing moments...I couldn't say a word good, then people would like laugh or something...In English more than Ukrainian.

Bohdan- [EL1] And things are a lot slower so you could just listen to it more carefully and understand what you're reading. Ok, when everyone's reading, you just gotta read behind them.

Researcher- and did you do that both for English and Ukrainian?

Bohdan- Yeah, but I think mostly more in English before Ukrainian. More into the later years in Ukrainian.

ii-e) Effortlessness and Word Length

Another area that appears to require effort, especially for UL2 readers is the multi-syllabic nature of the (U) language. Throughout the oral interviews, four out of five UL2 participants consistently use the terms "big" or "long" to describe Ukrainian 'words'. Only two EL1 participants use the word "big", one of which also uses the term "large" to describe English words. It could be argued that it is unclear whether the speakers are referring to "big" words, meaning complex or unknown *vocabulary* or actual *word length* measured by the number of syllables contained in a word (multi-syllabic). Having said this, I believe that in the context of what they are discussing, it is reasonable to conclude that they make reference to both, unknown vocabulary or word length.

Word length and vocabulary knowledge during reading have been identified as problem areas in UL2 reading by all five EL1 participants. Specific to word length, defined by number of syllables, three out of five UL2 readers comment on it directly while a fourth UL2 interviewee offers a less clear comment.

Vasel- so the longest word in the world, even if it takes you, you know, 5 minutes to read in Ukrainian, you can break it down...it helped to read the word, not so much to understand it...

Yalena-[re: UL2 reading out loud] I get nervous because the words are so big and I'm like, uuuhhhhhhhh!

Anastasia- 'cause you have these really big words, really long ones in Ukrainian that you're reading. Sometimes I have to read those slower than I have to read other words.

Vasel's comment, if analyzed in the context of his entire interview, is referring to word length, reading speed and complex vocabulary. Yalena appears to be referring to articulation and lower level decoding issues in the area of the speed of her sound-symbol processing. Anastasia, in the context of her entire interview, is referring to word length and the increased effort required to read the word.

A fourth UL2 reader, Bohdan, appears to be referring to word length as well as complex or infrequently used vocabulary:

Researcher- What stories would be the most difficult? [in Ukrainian]
Bohdan- [referring to difficult books in Ukrainian]...probably words, probably ones [stories] with too many long words. Boring stories. Long words, oh, about kings and queens, and *kozakea* was ok, but kings and queens and that was really boring. History, extremely worse...Or learning the names of different regions in Ukraine. That was really bad. I don't remember any of that.

The two UL1 participants do not make reference to either lack of vocabulary knowledge or excessive word length.

Two EL1 students refer to "large" and "big" words, however, they both appear to be commenting on complex vocabulary and/or initial lower-level decoding in (E) beginner reading. Furthermore, unlike reading in UL2, they view complex words as areas of challenge in the past, not the present. Irena's comment could refer to either word length (based on the example she gives) or unknown vocabulary or challenges

in lower-level processing of grapheme-morpheme relationships in beginning (E) reading.

Irena- I would kind of, and it took me awhile to sound some of the words out. But it was, I still kind of reward myself after I got through the big words like, I don't know, 'museum' or something.

Vasel's comments are also ambiguous; however, if viewed in the context of his interview and if compared to his comments about (U) word length, it appears that he is describing complex or unknown vocabulary, more than (E) word length.

Vasel- And that was good because you would just read, you would absorb the language and big words and you would learn about it...[re: Asimov and a book he challenged himself to read]...the guy used extremely large words.

These two students also "love" to read in (E) presently which further suggests that these were issues at various lower-level processing stages in beginning (E) reading.

ii-f) Articulation and Syllable Stress

- Reading can now be viewed as a skill that develops to a more automatic level depending on the degree to which the individual can accurately and quickly access phonemic and lexical representations already present in normal speech (Naslund and Smolkin, 1997, p. 161).

This statement is interesting since it calls into question the influence of oral proficiency on reading as well as the role of the Phonological Processor. This issue will be discussed in greater depth later; however, for this discussion on effortlessness and automaticity, it appears that the additional effort required to accurately articulate phonemes in L2 reading is perceived as an interference in L2 reading. McBride-Chang and Chang's study (1996) of 126, nine to sixteen year olds suggests that phonological processing measures predict word reading ability.

As previously mentioned, six students commented on difficulties in sounding out words in (E); however, for the EL1 readers, this does not appear to be a problem of articulation but a lower-level decoding issue that occurred in the past, during beginner (E) reading. UL1 participants do not comment on any articulation or pronunciation problems in (U) in the past or at present. It is therefore assumed that reading out loud, at present, in L1 reading is effortless based on the data presented so far in this chapter.

Regarding effortlessness as a sign of automaticity in L2 reading, six out of the seven participants correlate inaccurate pronunciation or articulation of L2 words with deficiencies in L2 reading proficiency. Although they do not refer to accurate pronunciation in UL1, the two EL2 readers do focus on its importance in EL2 reading.

Slawka- [EL2] Like I don't think it's important to read really fast as long as you have, you have like expression in your reading. And I don't know if you say the words right.

Metro- [EL2] I think it's better if you read a loud then just in your head, then you can like hear yourself how you say, otherwise you read, you don't know that word, you just skip it and you go to the next one.

Slawka directly comments on the need to pronounce the word accurately. Metro, appears to be saying that if he does not pronounce the (E) word, there is a good chance that he does not know its meaning ("then you can, like hear yourself, how you say").

Near the end of Slawka's oral interview, she recalls an incident where she remembers being able to remember not only the spelling of the (E) word 'bus' but

also how to pronounce it accurately. This incident captures the excitement created within the child learning to read, write and speak an L2.

Slawka- [EL2] I remember how, how me and my cousins were like brothers and sisters and how, the word 'bus', like specifically in Ukrainian the sound 'u' is an /ea/ and 'bus' is with a 'u' and he thought it was with an 'a' /ay/ but I knew it was a 'u' because I memorized it and I was all proud because I knew how to spell it. And I'd stand in front of the mirror and pretend I knew how to speak English 'cause I knew I was moving down here. And I'd pretend I knew how to speak so I'd speak gibberish.

As a reminder, six out of seven participants refer to (U) as an easy language to "sound out", an observation that at first glance, appears to encompass all aspects of symbol-to-sound relationships, including pronunciation. This may be true for the UL1 speakers, however, four out of five UL2 readers highlight (U) articulation difficulties which they correlate to both increased effort and interference in UL2 reading proficiency. This correlation appears to be related to lower levels of automaticity in UL2 reading¹⁰.

Vasel and Bohdan both comment directly on reading out loud and its effect on UL2 reading. Bohdan emphasized the need to hear oneself sound out words clearly in his recommended beginner UL2 reading strategy.

Bohdan- [UL2]...Out loud. Read it out loud. So you could hear what it sounds like for sure. Always read out loud. You pronounce sometimes, it's better to read it out loud.

¹⁰ It should be noted that it is not within the scope of this thesis to explore either the empirical evidence on the nature of the relationship between reading out loud and reading or text comprehension.

Vasel's comment captures the importance of accurate pronunciation during the early stages of reading, its role in automaticity and the effect of deficiencies in articulation on UL2 text comprehension.

Vasel- [UL2]...I concentrate so much on the reading that I can't understand the words. Like for pronouncing, to get a flow, periods, everything.

Anastasia and Irena's comments isolate both individual and letter combinations as being problem areas that interfere with UL2 reading comprehension.

Anastasia- ...some sounds are harder to sound out in Ukrainian. Like there's letters together, you might have to, I don't know. You have to struggle more to get out than you do than with English and that's also because you don't use it as much.

Irena- I'm very hesitant on saying everything. I kind of take like a really deep breath after every single word...I get really nervous when I do it...but how you say it, what the letters come out when they are combined with what they suppose to sound like.

These two UL2 readers also cite the importance of syllable stress in UL2 reading comprehension. Using the term 'accent', both Irena and Anastasia appear to be describing the frustration with UL2 word and syllable stress during reading, further evidence of the phonological processor at work.

Irena- When I'm reading to myself, there's not really any problems. When I'm reading out loud, it's just the words get like so scrambled up. I can make a few out but it's just like the, like which syllable like you put kind of, not really an accent but kind of emphasis on, but how you say it.

Anastasia- [when asked for what advice she would give students learning to read in (E), she actually gave advice for EL2 reading] To work on the sounds that you can't get...like I had a friend who came from Ukraine and he couldn't ever make the /th/ sound so I don't know, you have to work on the sounds I guess. And then you'll get your words.
...yeah, it's like my friends, they always ask me for words in Ukrainian and you have to get the accent I guess so there's nothing really, no strategies...

In other parts of her interview, Anastasia comments on needing to ask her parents for help sounding out whole words in both (E) and (U) when first learning to read, and that this as an on going problem in Ukrainian. It seems clear that she is referring to articulation difficulties based on lack of familiarity and frequency of use of these sounds.

Anastasia- Some sounds are harder to sound out in Ukrainian. Like there's letters together, you might have to, I don't know. You have to struggle more to get it out than you do than with English and that's also because you don't use it as much.

Yalena also describes difficulties she had with sounding out words in both languages when first learning to read, but does not give details.

iii) Consciousness of Reading Processes

The nature of this study asks students to remember and describe their reading experiences. Through this process, consciousness of reading processes develops. Since participants in this study give numerous details about lower level processes for L2 reading and for early L1 beginning reading, the results support the findings of Goncz & Kodzopeljic (1991) who conclude that bilinguals or students with high levels of competency in two languages have higher metalinguistic awareness that may, directly or indirectly contribute to consciousness in reading. Horiba (1996) in her study using think aloud L1 and L2 reading assessments, makes a similar observation, "L2 readers made more frequent comments on lower level processes and less frequent comments on higher level processes, whereas L1 readers did the reverse" (p. 443). According to my study, students describe vivid memories and recall specific details of lower-level process struggles when first learning to read in

(E), irrespective of it being an L1 or an L2. This consciousness satisfies Logan's (1997) 'unconsciousness' criteria for automaticity; it contrasts a time when (E) reading was not automatic (beginning reading) to a time (now or the present) when (E) reading is automatic.

Further evidence of automaticity could be the inability of students to remember their experience of learning to read their L1 (U or E). Three out of seven participants directly comment on this inability while a fourth participant, Vasel, comments on his awareness of not needing reading "strategies" in his L1.

Slawka- [UL1] I don't remember studying through any Ukrainian at all...See, I don't really remember starting to read. I just remember just being, always being able to read, no matter what...I just remember knowing it, somehow naturally.

Irena- [re: EL1 word reading] ...they just, one day, they almost, like out of the blue they came to me. I remember that. It was kind of weird.

Bohdan- [re: EL1 reading] In English, I don't remember learning much English at all. I don't know how I learnt it but I guess I just did... You pick up most of it.

Vasel- [EL1] English flowed more. It was, you don't so much analyze how you learnt it or how to remember it or how to speak it. It just more flowed so the strategy for English is just what you know or what you've picked up. Because English just flowed. I never had to really think about it, it would just come...strategies were just hidden within me and I don't think I could express it because it was just so much more at ease that I wouldn't even think about a strategy. I wouldn't need one.

It is interesting to note that Vasel is also unable to offer any specific strategies to beginner readers, other than suggesting that they ask for help when reading and "read more". Could this be an indication of the unconsciousness of his seemingly, fully automatized EL1 reading? The remaining three participants recall the teaching strategies others (parents, relatives and teachers) used to help them learn to read.

None of the participants comment on higher-level processes presently used in their L1 reading; however, several equate lack of UL2 speaking proficiency to lower UL2 text comprehension. The two UL1 participants do not make this correlation, nor do they claim ongoing reading difficulties in either language which suggests that automaticity has been achieved in both UL1 and EL2 reading. The role of UL2 verbal proficiency in UL2 reading will be explored in Chapter 5.

UL2 readers give vivid descriptions of their difficulties in UL2 reading. As we have already seen, problems with reading speed, articulation of individual letters, letter combinations, whole words and syllable stress, all lower-level processes, have been identified by all five UL2 readers. These areas of concern appeared only in the beginning stages of learning to read for EL2 readers and at present, cease to be an issue. UL2 readers also identify limited frequency of (U) reading and overall lack of use and exposure to (U) in their external environment as interfering with their acquisition of grammar (a higher-level process outside the scope of this thesis). However, some of the participants correlate this situation with their present lack of UL2 vocabulary knowledge, a factor in word recognition skills necessary for text comprehension.

iv) Autonomy or Vocabulary Knowledge

The final condition of automaticity in reading, as defined by Logan (1997), is *autonomy* or the inability to stop oneself from knowing the meaning of a word. This final stage of the lower-level process of word recognition, involves the ability to fully decode a word from its initial visual representation to the comprehension of its

meaning. Autonomy, in this context, will be defined as the ability to utilize word knowledge to reconstruct text meaning, a skill lacking in UL2 reading, as defined by UL2 readers in this study. This deficiency was often voiced several times during one interview. All five UL2 readers comment on lack of vocabulary as a problem area during UL2 reading. Three students explicitly comment on it.

Vasel- [UL2] ...It was just, you'd have to, like (U), you just had to look up so much you just didn't understand like, 90% of the stuff.

....Yeah, it was just not, not fun. I didn't like books like that. Also, I don't like books in Ukrainian, which use big words. That's not cool, so I can't understand them.

...In English, it was like an image would come to your head immediately. When you read it, you would see it and picture it and with words you didn't know, you could almost guess their meaning or figure it out. In Ukrainian there's so many holes in the sentences that you just miss out.

...when I read Ukrainian you have to almost have to look up every third or fourth word or you have to go ask ...

Anastasia- [UL2] I think, well, I guess because I don't use Ukrainian as often. There's millions of word that I don't even know in Ukrainian because I don't know, I don't use big words. There's no need for me to.

Bohdan- [UL2] [re: books he finds difficult in (U)] ...probably words, probably ones [stories] with too many long words. Boring stories. Long words, oh, about kings and queens, and *kozakea* was ok, but kings and queens and that was really boring. History, extremely worse...Or learning the names of different regions in Ukraine. That was really bad. I don't remember any of that.

...Ukrainian, you kind of have to read it slowly and think about most of the words.

These statements about 'big' words are obviously descriptions of complex or unknown vocabulary. The remaining two UL2 readers also equate lack of vocabulary knowledge with lower UL2 reading skill levels. In Yalena's case, she prefers to read dialogues or conversation during UL2 reading.

Yalena- [UL2] Well, I don't read as much in Ukrainian as I do in English...[re: her preference of (U) reading material] ...I think it's just 'cause

they say shorter things and you can understand it better than when it's in a big paragraph.

Irena's comments reflect the initial paradox presented in this chapter, that is, that reading in (U) is both easy and difficult. She quite clearly suggests that it is difficult to read because she cannot understand a lot of it. Although knowledge of syntax may also be a factor, it appears she is clearly referring to lack of vocabulary knowledge.

Irena- [UL2] – Because other kids were just a bit slower. And their parents didn't maybe talk to them as much in Ukrainian and it didn't make sense. And it's pretty easy to read because you just sound it out and it sound almost exactly like it's written.

Irena- [UL2] That's the first thought when you start Ukrainian, you just want to quit because it's kinda hard unless you've grown up with it for a while. And I fortunately have been speaking Ukrainian. That was I think, my first language, that's what I learned when I first learned to talk, speak. And yeah, it is kinda frustrating. It's very frustrating actually. But some of it starts to make sense. There are some words that kind of sound the same. That kind of almost look the same in Ukrainian as in English, and it's just that if you really want to read Ukrainian, then work at it really hard.

Irena- [re: present UL2 reading]...Like right now, we're doing weather and temperatures and everything and telling times, the basics. So, it's, it's, I don't find language extremely hard. It's getting easier for me. It's just like the geography and literature that's hard to, it's even hard to read that stuff.

The two UL1 speakers do not refer at all to vocabulary in Ukrainian or to any present problems with vocabulary in EL2. They do mention having memorized (E) words in the past. Slawka remembers her mother translating EL2 words into (U) so she could understand and memorize their meaning. She mentions, when asked, that she doesn't like essays with complicated vocabulary; however, does not elaborate.

Slawka- [EL2] Like essays on really insignificant things that I really could not care about is really hard to read for me. Especially a complicated vocabulary.

Metro remembers his aunt quizzing him on EL2 reading assignments, helping him learn to read in EL2 and memorize vocabulary. He also recommends reading out loud as a method to check if you "know" a word in EL2 and if you don't, to look it up in a dictionary and memorize it.

Metro- [EL2] [his aunt when he was still in Ukraine] ...she used to come and just like, help me memorize the words, and pronounce them correctly ...If you don't know a word, you can just write it down and look it up and you can memorize it so you can know the next time what it is. Of course, it takes a long time, but...
...I think it's better if you like read aloud then just in your head, then you can like hear yourself how you say, otherwise you read you don't know that word, you just skip it and you go to the next one.

Summary

Based on Logan's (1997) criteria for automaticity in reading, this study concludes that UL2 readers struggle with automaticity in lower-level reading processes in all four criteria areas, as defined by Logan (1997). Slower reading speed, difficulties with articulation or pronunciation of UL2 words, attributed to word length, syllable stress and infrequent use of (U) phonemes, and lack of vocabulary knowledge are all identified as areas that require conscious effort.

The high school students in this study reported that learning to read in EL1 and EL2 was difficult due to the complex spelling patterns, or inconsistent sound-to-symbol relationships of English (i.e. its deep orthography). At present, it appears that both EL1 and EL2 readers have achieved full automaticity when reading, specifically in lower-level processes. This achievement for the two EL2 students appears to be greatly influenced by their total immersion in an English dominant society for a minimum of five years.

Chapter 5

Discussion

Second Language Reading Research

As previously noted, SLR theory has closely followed L1 reading research has predominantly been a *shadow* of the first language reading process. Alderson & Urquhart (1984) state:

We do not, and indeed find it difficult to, draw a clear distinction between first and foreign language- in fact, it is not clear to what extent reading in a foreign language is different from reading in a first language (p. xv).

Current L2 research challenges this statement. By looking inward, onto its own shadow, SL researchers have found their own voice; a voice that offers invaluable new information and also sheds light on L1 reading.

One of the obvious differences between L1 and L2 reading, as mentioned previously, is orthography. But does this affect reading? And if so, how? Numerous cross-linguistic studies suggest that cognitive strategy use may vary during reading due to language specific properties of orthographies (Koda, 1992,1996; Muljani, Koda & Moates, 1998; Chikamatsu, 1996). Research into the effect of *shallow* or *transparent* orthographies that have consistent sound-to-symbol translations and contrasting *deep* or *opaque* orthographies that have more complex visual or sound-symbol relationships (such as the complexity of English spelling or logography such as Chinese characters or Kanji) further indicate that different languages may rely to varying degrees on certain cognitive processes (Romanowski,1981; Katz & Feldman,

1979; Wimmer & Goswami, 1994; Koda, 1992, 1996; Muljani, Koda & Moates, 1998; Chikamatsu, 1996).

Learning the L2 orthography is therefore a critical pre-stage to being able to sound out letters, letter combinations, syllables and eventually words. Of course, text comprehension, the ultimate goal in reading involves a number of aspects, beyond written symbol identification. These aspects, formerly considered bottom-up and top-down processes, are now referred to as *lower-level processes* and *higher-level processes*. (Koda, 1992; 1996; Henderson, 1981; Eskey, 1988; Levy, 1979 quoting Massaro 1977; Clarke, 1979; Samuels & Kamil, 1984). Koda (1992) defines these two processes:

Lower-level processing refers to the processes involved in extracting visual information from print, such as letter identification and word recognition, which can be contrasted with higher-level processing, such as syntactic manipulation and inter-sentential text integration (p. 502).

Koda (1994) cites three fundamental differences between L1 and L2 reading.

Firstly, the reader usually has some L1 reading skills prior to commencing L2 reading. Secondly, some of their L1 reading strategies are transferred to their L2 reading (Horiba, 1996; Koda, 1989; Chikamatsu, 1996). Thirdly, while oral proficiency precedes L1 reading, usually the opposite condition is true of L2 reading. This third point has far reaching implications since lower oral proficiency has been shown to interfere with reading proficiency in a number of ways. Devine (1988) cites Clark and Silberstein and states:

"Our students' efficiency in using reading skills is directly dependent upon their overall language proficiency – their general language skills (1977:145)...The critical interaction of language proficiency and reading ability is now generally well accepted (p. 261).

Less L2 oral proficiency (particularly when an L2 is being learned in a foreign language setting) often includes less frequent exposure to the L2 which in turn means a smaller pool of L2 vocabulary to draw from during reading. The impact of a less developed vocabulary store cannot be underestimated. Clarke (1988) claims a *language ceiling* or *L2 linguistic ceiling* is responsible for determining individual reader use of various higher and lower cognitive processes. He also discovered in his study that proficient readers' L1 reading strategies were sensitive to L2 oral proficiency limitations and therefore were not transferred to L2 reading. Hudson (1988) refers to Cziko (1978) who similarly discovered that syntactic, semantic and discourse constraints, accessed by proficient L1 readers, were not fully utilized during their L2 reading due to limited L2 language knowledge. Koda (1992) cites several studies that determined "low quality verbal processing skills produced individual differences in reading comprehension even among college-level L1 readers (pp. 502)". Verhoeven (1988) discovered that in Holland, Turkish (L1) elementary school children with limited oral proficiency skills in Dutch (L2) were inhibited in both word recognition and reading comprehension.

In summary, recent L2 research has determined that lower-level and higher-level processes during are affected by L2 orthography and overall language proficiency. Lower levels of L2 vocabulary can affect word recognition skills and inhibit L2 text comprehension. Orthography, oral proficiency and vocabulary knowledge have all been defined as problem areas that interfere with UL2 text comprehension by all of the participants in the study discussed in this thesis.

Re-visiting Adams' (1990) Reading Model

Specific to this study, automaticity deficits have been identified in (1) UL2 reading speed; (2) UL2 articulation of individual letters and/or syllables; (3) UL2 vocabulary knowledge. In particular, lack of UL2 vocabulary knowledge appears to be the major stumbling block in UL2 text comprehension. In this discussion, I will attempt to relate all these findings to Adams' (1990) reading model before I consider pedagogical teaching strategies.

As mentioned previously, Adams' (1990) connectionist reading model postulates that a reader relies on four processors to successfully achieve text comprehension: Orthographic Processor; Phonological Processor; Meaning Processor; Context Processor. The scope of this thesis is limited to lower-level processes in both L1 and L2 reading, therefore, the use of the Context Processor, dependent on higher-level processes such as accurate word recognition and use of syntax, will not be discussed.

In order for the Meaning Processor to effectively access the meaning of a word stored in a reader's memory, it must receive coordinated, timely, and accurate input from the Orthographic, Phonological and Context Processors. For example, if a word is familiar or has been frequently encountered by the reader, the Orthographic Processor can directly access the word's meaning in the Meaning Processor. In proficient readers, the strength of the Orthographic Processor's stimulus (based on its familiarity with the word) is almost instantaneous. This process is dependent on the meaning of a word being stored in the reader's memory. If the word is not stored in a reader's long term memory, it obviously cannot be accessed.

Because the Orthographic Processor is the only processor that has direct access to print, it is highly dependent on both the quality of the print and the reader's ability to decode it. If the whole word is not recognized, the reader must rely on accurate recognize of its components (syllables, spelling patterns and in the least proficient form of reading, individual letters). If these lower-level decoding processes are deficient, the stimulus (activated by the visual pattern of the word) will be weak and threshold will not be reached; that is, it will not stimulate or activate the node responsible for "containing" the word to the sufficient degree required to access word meaning¹¹.

Although the Orthographic Processor is the first Processor activated, the Phonological and Context Processors are almost simultaneously activated to assist the Meaning Processor to gain lexical access. If a reader does not immediately recognize a whole word in print, he or she may access its meaning with the help of the Phonological Processor. During reading, the Phonological Processor functions in two ways; (1) it expands the reader's "verbatim" memory by holding the sound or auditory image of individual letters, spelling patterns, or syllables in the reader's

¹¹ The view of 'parallel distribution' divides cognition not only into higher and lower level processes but also into *knowledge sources* referred to as feature, letter, letter-cluster, syntactic, and semantic levels (Levy, 1979). Dependent on the reader's skill level and individual strategy use, text comprehension may be a reflection of the *first* process or level to reach (through excitation) *threshold* (Sinatra, 1990; Verhoeven, 1988). Muljani, Koda & Moates (1998) further examines the issue of *excitation* and *inhibition* during reading;

...word recognition is viewed as a number of interlinked processing units, which interact and impact upon one another through spreading activation within, as well as between several processing levels, such as orthographic, phonological, semantic, and contextual. Following a sequence of excitations and inhibitions, a pattern of distributed activation is established across processing units when the processing efficiency reaches its maximum (p. 101).

short term memory; (2) it provides a possible faster alternate lexical access route, via sound (instead of a visual pattern) to the Meaning Processor. For example, if a reader does not immediately recognize the printed word "water", the Phonological Processor can break the word into its individual letters, or preferably, into two syllables, "wa" and "ter". If these two syllables are decoded fast enough by the Orthographic Processor, the Phonological Processor can hold them in short term memory long enough to form the word, "water", which is then immediately sent to the Meaning Processor. Unfortunately, once again, even if the reader is able to efficiently sound out the word, if the word is not stored in the readers memory, its meaning will not be accessed.

Adams' Reading Model and The Findings of This Study

The UL2 readers in this study identify lack of UL2 vocabulary as a hindrance in UL2 text comprehension. They attribute this UL2 vocabulary knowledge deficiency to their overall lack of exposure to the language. In particular, they point to their lack of (UL2) oral proficiency and their limited use of UL2 "big" words. Secondly, although (U) is defined as "easy to read", these same UL2 participants express frustration with overall slower UL2 reading rates and more specifically, slower reading of (U) long words. The number of syllables in many Ukrainian words far exceeds the number found in most English words therefore, "long" words are a characteristic of the language.

If we analyze the reading process in Ukrainian, according to Adams' (1990) reading model, several observations can be made. First of all, due to the transparency

of (U) orthography, word comprehension cannot be assessed according to the students' ability to successfully decode or sound out a word. This differs somewhat from English, where based on its deep orthography, certain words cannot be "sounded out"; therefore, oral reading may be more of an indication of word comprehension. Many of the UL2 students stated that they could sound out words easily but they often didn't comprehend what they were reading.

Limited UL2 vocabulary knowledge inhibits both the Orthographic Processor and the Phonological Processor. Lack of familiarity with UL2 written words weakens the impulse sent directly from the Orthographic Processor to the Meaning Processor. This is further compounded by the fact that the word's meaning is not available for access by the Meaning Processor; hence the direct link between these two processors, essential for skillful reading, is not utilized. In this study, the UL2 readers perceive themselves as not having a sufficient repertoire of vocabulary to consider themselves proficient UL2 readers. For the students in this study UL2 vocabulary expansion is critical to increase UL2 text comprehension.

Furthermore, although UL2 sound-to-symbol conversion is considered "easy", it is done slowly. This is attributed to word length that suggests UL2 reading is slowed down due to increased effort required to read syllables. If this is so, then the Phonological Processor may not be able to hold individual word components long enough in a reader's short term memory to access word meaning. This deficiency may also occur within long sentences, where the reader is unable to retain the individual words in short term memory long enough to decipher sentence meaning. UL2 articulation difficulties may also contribute to slower reading speeds, which

may further interfere with the Phonological Processor's ability to expand the reader's memory during reading. Reading speed therefore, appears to be of greater importance during the beginning to intermediate stages of reading for readers of Ukrainian than perhaps for readers of English. This suggests that the Phonological Processor plays a greater role in the earlier stages of learning to read (U).

In contrast, reading in English may require greater use of the Orthographic Processor in the beginning and intermediate stages of reading. Both EL2 readers comment on this direct link between the printed word and the Meaning Processor. Metro discusses "skipping words" in English when he reads while Slawka mentions how important it is to be able to know how to pronounce a word when reading English. Therefore, when teaching English, emphasis on decoding letter combinations and spelling patterns would be of greater importance than in Ukrainian where syllable reading speed appears to be essential for word memory retention.

As mentioned, the Phonological Processor is an alternate route for lexical access. However, if the reader does not recognize the word via its sound, as appears to be the case for many of the UL2 students, this processor, even if it is able to retain the entire word in short term memory, may still be unable to achieve its goal, to facilitate word or text comprehension. This is an issue not only for UL2 but for many students who are trying to learn an L2 in a foreign language setting.

It appears that different teaching strategies need to be utilized at different stages of reading development in both (U) and (E). Also, reading out loud exercises, as an assessment of reading skills may be a better assessment of English text comprehension than Ukrainian text comprehension. Although not a clear indication

of reading comprehension, such an activity could be used to promote UL2 reading speed, a critical component in reading long (U) words. Furthermore, the activity would facilitate articulation of (U) phonemes, a concern for some of the UL2 students, which in turn could both increase reading speed and a student's comfort and confidence level during UL2 reading.

It is common in a thesis or study to recommend strategies for classroom practice based on the words of renowned reading researchers and educators however, the reading experts, in this thesis, will be the students themselves. What do they say works for them? Moreover, based on their perception of what interferes with UL2 text comprehension, what classroom reading strategies can be recommended? The information gathered from the students' transcripts form the basis for many of the teaching strategies recommended in the next and final chapter.

Chapter 6

Recommended Teaching Strategies

In English it was like an image would come to your head immediately. When you read it, you would see it and picture it and with words you didn't know, you could almost guess their meaning or figure it out. In Ukrainian, there's so many holes in the sentences that you just miss out.

Vasel, a study participant

Regarding second language instruction, Goodman (1970) states, "learning to read a second language should be easier for someone already literate in another language, regardless of how similar or dissimilar it is" (p. 68). He adds that control over the grammatical system, strong semantic input, choice of texts, level of L2 oral proficiency, use of natural context and focus on comprehension strategies are critical in L2 text reconstruction (p. 69). For the purpose of this thesis, only teaching recommendations for improvement of automaticity deficiencies in lower-level reading processes will be discussed. These include the need for UL2 comprehension strategies, a greater choice of texts, and the overall need for increased UL2 oral proficiency.

Before proceeding, it is necessary to note that careful attention has been paid to distinguish between what students were told about reading, what they were taught, what they perceive themselves as doing, and what they, personally found useful. This was accomplished by providing a variety of questions during the oral interview that clearly delineated these categories. For example, the students were asked a

variety of questions pertaining to what they: (1) personally do that makes reading easier; (2) were told to do (tips, advice, etc.) by parents, relatives, friends, etc.; (3) were taught to do by teachers; (4) found/find helpful (or not) (5) would advise students (who are first learning to read) to do; (6) thought were reading differences between languages. The students' responses to some of these questions will be selected and expanded as suggestions for increasing UL2 reading proficiency.

i) Vocabulary Knowledge and L2 Text Comprehension

As mentioned earlier, one of the requirements documented by the students for improving their UL2 proficiency is greater UL2 vocabulary knowledge. UL2 vocabulary stores can build if the students have an increased frequency of exposure to both UL2 spoken and printed words. Rott's (1999) study of L2 vocabulary retention (over a 4 week period) cites frequency of exposure as the determining factor in vocabulary retention. Two exposures to a word increased the reader's vocabulary knowledge, however, six exposures "produced significantly more vocabulary knowledge" (p. 589). Systematic text introduction is one way of ensuring that vocabulary is recycled. This bottom-up approach is only one way to build vocabulary and might best be done according to a language experience approach.¹²

Another way to increase the students' exposure to words would be to increase the amount of time spent reading both in and out of class. All the participants in this study claim that "practice" improves reading in general but at present, it is critical to

¹² The language experience approach contrast to the traditional behaviourist approach involving rote memorization, parroting and decoding (as opposed to meaning making)

UL2 reading improvement. Since merely increasing the time spent on reading in the classroom however may not be efficient or practical, a number of options need to be considered. Logan's (1997) *instance theory* suggests that only one exposure to a printed word, if significant to the reader, can create a strong and lasting connection between the Orthographic Processor and Meaning Processor. This means that simply recycling vocabulary does not guarantee vocabulary retention. Nor is it the only method for increasing vocabulary knowledge. If the text is significant to the reader, one or two exposures to the word are sufficient for it to be stored in long term memory.

How then can we determine what is significant to the reader? Logically, it would seem that if a student is motivated to read in (U), chances are that vocabulary retention will automatically increase because they are interested in the text. If a reader has options and choices from a variety of reading materials that appeal to their age group, the likelihood that they will select topics that interest them increases. For example, in-class reading activities of carefully chosen authentic reading materials can be time efficient, interesting and useful as a method to control and build vocabulary knowledge. Since the dismantling of the former Soviet Union, authentic texts that contain current usage of the Ukrainian language are now more readily available. Although the Ukrainian language in these texts may not precisely reflect the (U) language taught in Canada, this variation can be used to encourage classroom interaction. Several publishers in Canada also offer a variety of Ukrainian-Canadian authentic reading materials of interest to various age groups. Besides facilitating reader interest, a number of classroom issues may be addressed by providing a cross

section of magazines, newspapers and books to introduce new vocabulary. First of all, the diversity of student (U) abilities in a classroom can be accommodated if the student has access to authentic texts within or slightly above their individual language level ability.

Another method useful for second language reading instruction, as discussed by Richards (1998) promotes Krashen's concept of *extensive reading*. Extensive reading incorporates using a combination of bottom-up and top-down teaching strategies that improve not only reading proficiency but overall L2 language proficiency; that is, reading skills are transferred to other aspects of language proficiency. As we have just discussed, the use of authentic texts in the classroom can help to build UL2 vocabulary, be the basis for grammar discussions in their natural context, as well as an opportunity to practice (U) listening and speaking skills. This is a top-down approach to reading in that it can activate and enhance: a learner's knowledge of UL2 syntax (grammar); their background and cultural knowledge; their ability to guess; infer; and predict, etc. (skills also used in L1 reading). Interestingly, reading as a method to increase overall EL1, EL2 and UL2 proficiency is highlighted by all of the students, even though they were prompted by questions on how to improve UL2 vocabulary knowledge during the oral interview.

ii) Oral Proficiency to Enhance L2 Reading

UL2 oral proficiency, as well as being another venue to increase language exposure and word frequency, can also foster (U) reading. Speaking can familiarize the student with (U) phonemes, strengthen syntactic knowledge and facilitate storage

of vocabulary knowledge in long-term memory. Six out of seven participants commented on the importance of oral proficiency as an avenue for vocabulary building. Other than Slawka, all of the comments are about the interviewee's second language. It appears that these students are not only conscious that a relationship exists between oral proficiency, and reading, they are also keenly aware of what influences their ability to read in UL2; lack of vocabulary knowledge and/or the need to enhance their oral proficiency skills.

Vasel- [UL2] ...my grammar is horrible. This is a problem from lack of speaking, not from lack of learning...speaking...you don't really express yourself too much. So from lack of speaking, my grammar is quite bad. ...in Ukrainian, you just pick up a lot of words like, like just like the church songs and stuff. A lot of words you can pick up which aren't so common. And uh, just to sing them, you would pick up these words and these phrases and that was really good for the language, is just the singing.

Bohdan- yeah, and it was just easy because that's all I spoke [U] and there was just books everywhere and it just came easy, easy, started reading Ukrainian before I went to school
... but now I can't speak or understand as much as I used to in Grade one in Ukrainian and English is a lot faster. Ukrainian you have to read it slowly and think about most of the words...so I guess English is easier to read, speak than Ukrainian.

Anastasia- ...Like there's letters together, you might have to, I don't know. You have to struggle more to get it out than you do than with English and that's also because you don't use it as much.

Slawka- ...like learning to speak Ukrainian in Ukraine is a lot different than learning to speak it here...In Ukraine, like I mean it's your first language so it's easier to learn...

Irena- Because other kids were just a bit slower. And their parents didn't maybe talk to them as much in Ukrainian and it didn't make sense.

Anastasia- ...some sounds are harder to sound out... You have to struggle more to get it out than you do than with (E) and that's also because you don't use it as much.

...listen to stories and I don't know, even listen to stories made reading a whole lot easier. 'Cause you can hear a word your Baba [grandmother] and then you'd recognize it in a book, like just, yeah, it was easier.

Based on these perceptions, speaking in (U) as much as possible in the classroom can only enhance (U) acquisition in all skills. As previously mentioned, interactive reading activities that involve discussion and questions about the text through the medium of (U) speaking is an efficient way to promote UL2 multi-skill development. If attention is drawn to new vocabulary items and if these items are consciously implemented during the discussion the students will be exposed to these new words through a wider variety of the senses (reading, listening, speaking). Vocabulary activities or "games" can be time efficient, productive and fun.

iii) Listening to Enhance L2 Reading

Anastasia's and Vasel's previous comments also highlight the need to hear the UL2, a "listening" venue through which vocabulary knowledge can grow. Metro's next statement captures both the importance and wonder, as a child, of his first experience of hearing EL2.

Metro- [EL2]...she used to talk to us in English and we would get used to hearing it. Just like you look at the picture and your eyes would open, like what are you saying?

Irena and Vasel highlight the importance of sound, specifically of cognates. These are words that "sound" similar in (U) and (E) that, if in the context of the reading passage, are explicitly taught by the instructor, can facilitate word recognition.

Vasel [UL2]- ...these words up around the classroom and thinking oh, that kinda sounds like an English word that one doesn't. That one kinda does.

Irena- [UL2]...There are some words that kind of sound the same. That kind of almost look the same in Ukrainian as in English, and it's just that if you really want to read (U), then work at it really hard.

Also, knowing that the significance of the material to the student can determine the strength of a connection that he or she requires to retain the knowledge, a multi-media approach to increasing UL2 exposure and use seems mandatory. With the increase of accessibility to resources such as videos, movies, listening tapes, television programs, Internet websites, television programs (such as *Contact*), speakers from Ukraine, etc., listening activities can be increasingly interesting for students.

iv) Mapping Sound to the Word

Like reading, listening is a receptive language skill. The major difference, as distinguished by Goodman (1970), is that one exists in written form and therefore involves visual perception while the latter exists in sound, that is, it is received as an auditory image. Six out of seven participants identify a strategy to improve reading that involves a combination of looking at the visual pattern (written symbols) of a word while simultaneously listening to the aural representation of the word. This strategy is used for both L1 and L2 reading.

Slawka [EL2]- ...test...teacher...marking... if you switch around papers and stuff, like so you don't cheat or whatever but if she'd say it out loud, just how you'd spell it, it just stuck to me more. 'Cause you'd hear it and she'd repeat it a couple of times and it just, you' hear it and then you're looking at it. And just, I don't know, it just gets into your head faster and would stay in there longer.

Bohdan [EL1 and UL2]- And things are a lot slower so you could just listen to it more carefully and understand what you're reading. Ok, when

everyone's reading you just gotta read behind them...yeah, but I think mostly more in English before Ukrainian. More into the later years in Ukrainian.

Anastasia [EL1]-... I'd ask my parents what the tough sounds were...I used my fingers to guide me through the words.

Yalena [EL1 and UL2]- well, I remember trying to sound out the words as best as I could and I couldn't get some of the words so I would ask the teacher to read it for me... Well, I would always go to my parents and ask them, what's this word, what's this word. And they'd say it to me and they'd make me repeat it.

Bohdan [UL2]- And things are a lot slower so you could just listen to it more carefully and understand what you're reading. Ok, when everyone's reading you just gotta read behind them...yeah, but I think mostly more in English before Ukrainian. More into the later years in Ukrainian.

Irena- [UL1] I think read with a friend maybe, I think that would be really helpful...or an older parent or have your parents read to you at night. That kind of somehow gets, like the mind going or something. And it's not like, it just kind of like helps you read a bit more. I'm not sure exactly how but that helps a lot...

Metro- [EL2]...she (his aunt) used to come and just like, help me memorize the words, and pronounce them correctly. Read me stories and give me exercises...we'd do it together.

This strategy, which develops and increases use of the Phonological processor (Adams, 1990) is employed by many parents and elementary school teachers during beginning reading, however, is a strategy often overlooked when teaching older children and adults.

Although reading out loud is one way to implement this learning strategy in the classroom, this can be very stressful for some students. Having a teacher read or introducing auditory tapes for reading passages is another way of linking phonemes to visual patterns or words to their sound. Of course, in order for this activity to be efficient, follow up or intermittent interaction regarding the meaning of the text should be implemented. Moreover, besides drawing attention to unknown

vocabulary, this would also provide opportunities for higher-level processes to be activated (use of syntax, schema, context) to determine text meaning.

v) Shallow Orthographies and the Bottom-up Reading Approach

As we have seen in earlier cited research, vocabulary knowledge is not a prerequisite for fluent decoding of script (without comprehension) for shallow orthographies such as Ukrainian, although for languages such as English, which have deep orthographies, vocabulary knowledge is more critical if words are to be sounded out effectively. Romatowski's (1981) miscue analysis of Polish reading¹³, found that Polish L1 fifth graders who had the fewest miscues (errors during reading out loud) also had the lowest text retelling scores, further proof that fluent reading in a shallow orthography does not necessarily mean the reader is comprehending the text. Romatowski (1981) concluded:

...the Polish story caused readers to be more vulnerable to losing or garbling the deep structure. Several factors contributed to this. Among these were the highly multisyllabic nature of the language, the regional language in the story, and the extraordinarily long sentences, some with as many as 39 words (p. 25).

This knowledge of the language could be useful for text comprehension if addressed during top-down reading activities by a SL instructor.

In this study, high school students with over a decade of exposure to (U) still struggle at various levels of UL2 sound-to-symbol translation. Perhaps a variety of top-down strategies, in combination with oral reading (to address basic articulation difficulties) may foster increased UL2 text comprehension.

¹³ Although not Cyrillic script, Polish is a Slavic language also considered to have a transparent orthography.

Regarding bottom-up approaches for shallow orthographies, all the students comment on the need to know the alphabet and their corresponding sounds and letter combinations. Katz and Feldman (1981) discovered that both American fifth graders reading English and Serbo-Yugoslav readers of Serbo-Croatian use syllable coding as a viable strategy in word recognition. The students in this study recommend this same approach to facilitate (U) reading comprehension.

Slawka- [UL1]- Ukrainian is easy. What you see is what you read so you can put the syllables together, the two letters and I think it's really easy.

Metro- [UL1]...I tried to read like whole word or better but I think it would be like faster if you just read syllables. Like somebody's name, *Volodemar*, like you stop at it, you read it in your head, say *Vo-lo-de-mar*, then you say, *Volodemar*.

Yalena- [UL2] In (U) I would tell them to learn the alphabet really good first. And then when you go to reading, if you can't get a word, just slowly sound it out.

Anastasia- [UL2] ...teach them the sounds of the alphabet, like the sounds of each letter. And then maybe work up from there...just to have those reading circles where you pass around a book and let a kid read each paragraph or something. That should be an easy way to learn.

Irena- if I can't remember what letter goes next, I kinda sound it out in my head 'cause it is pretty tricky. And with the alphabet, I just kind of replay it over and over in my head.

By breaking down long (U) words into syllables, (U) reading comprehension can be enhanced because it increases the rate at which students read- a critical component for short term memory retention. We must remember however that accurate translation of (U) phonemes and sound-to-symbol translation does not guarantee word recognition or comprehension, especially in languages with shallow and transparent orthography. Vasel's comment describes the ineffectiveness of reading of

syllables. This is both too slow and assumes that the reader knows how to break a word into parts.

Vasel- [UL2] Any long word, just break it down into the sounds and...it worked to read the word, not so much to understand it because it broke it up and when you're reading a word like if you, in English, like 'certainly'. You're reading it like 'cer-tai-n-ly', it would be, uh, the whole concept is hard to grasp...so in (U) you would break it down in to those sounds...you had to slow down...it helped me read but understanding it, no.

Teaching strategies that focus on word reading strategies may be useful to simultaneously counteract this potential morphological information gap. Also, Vasel's comment clearly reflects the hypothesis that suggests that during reading, working memory or short-term memory is critical in 'holding' a word's auditory image for lexical access to occur via the Phonological Processor (Adams 1990; Thurlow & van den Broek, 1997; Naslund & Smolkin, 1997; Harrington & Sawyer, 1992; Samuels & Flor, 1997). In other words, if UL2 sound-to-symbol translations or syllable reading within a word, or if the reading of whole words within a sentence is too slow, text comprehension will suffer since working memory will not be able to hold the phonemes or auditory images. Simply put, if the student can "hear" the word he or she is trying to recognize, there is an increased chance that the word will be recognized or its meaning understood.

Based on these research findings reading activities that enhance word-reading speed could also be useful, if of course, these activities are performed in conjunction with activities that also facilitate text comprehension. Both UL1 students remembered reading speed exercises performed in Ukraine.

vi) The Importance of a Support System in L2 Reading

All of the participants comment on those who helped them achieve some level of reading proficiency in both L1 and L2 reading: parents, relatives, peers and of course, teachers. Although a seemingly minor point, the importance of this support system for L2 or FL reading should not be underestimated. Even though the students in this study cease to be young children, they are, for the most part, still learning to read with proficiency in UL2. An ongoing UL2 infrastructure, whether in the home, in the community and/or in the classroom is a critical mechanism for facilitating UL2 acquisition, in particular, however, for UL2 reading.

This mechanism or support structure also appears to be influential and beneficial for student motivation, a critical factor for the eventual successful attainment of reading in any L2. Metro [UL1] succinctly sums up the societal pressure and ensuing motivation that propels most individuals to successfully achieve L1 reading success while Slawka [UL1] echoes this when she recalls the intense pressure involved in immigrating to a new land and being suddenly immersed in EL2.

Metro- [UL1] [re: his *Dido* (grandfather)] And he had this, like sheet of paper and he had like these sentences written. You have to learn how to read...Well, back then, I never really liked school. I never really tried like if I could read better or whatever. I knew I had to know how to read and write but I never really liked school.

Slawka- [EL2] I remember it being really hard...my mom wanted me to learn to speak it [E] and read it as fast as I possibly could.

These stressful experiences were shared openly by both participants and were not a response to a direct question. This is also the case for the following quotes regarding the motivation and pressure that has been required thus far in UL2 reading. A combination of family assistance, societal acceptance and pressure, community

support and of course, dedication are elements that have positively influenced these students.

Yalena- [UL2] ...my parents would read it to me first and then I would read it back to them.

Irena- [EL1] I basically memorized the book and just kept it on the same page and went through the whole thing without turning the page. But I, I really wanted to start reading
...[UL2] [re: grandparents, relatives, parents] ...they talked to me in Ukrainian, they read to me in Ukrainian, and they, uh, again, no tips but again, the encouragement. And almost the need to please them, to make them happy because they were putting so much effort into it... And I just, I just keep myself motivated because I want to make my family on both sides kind of proud of me.

Bohdan- [UL2] ...so you can just joke around in Ukrainian so you can do this in (U) as opposed to English where you'd just kind of be reading a story. Ukrainian, we'd kind of help people, let's say you're passing, mostly in your community. It kinds of bonds and you just have fun.

Vasel- [UL2] ...because the community is so friendly, like, you like them, it's great...And so the only thing that keeps me going in (U) is my parents and uh, up to now.

Conclusion

This study identifies the perceptions of obstacles faced by seven high school students as they shared memories of learning to read in two languages. After analyzing their questionnaires and interview data, this thesis suggests that students experience different levels of automaticity at various stages of their reading development in (U) and (E). For UL2 learners, automaticity continues to be a struggle particularly at lower level processing involving word recognition. This seems to be because of a lack of knowledge of a word's meaning. This does not appear to be the case for the

two UL1 participants since they do not voice the UL2 readers' paradox; that is, (U) reading is both "easy" and "difficult".

This study has several limitations. Firstly, it is a synopsis of the students' perceptions as opposed to an actual empirical account of their skill levels. Second, it did not explore student awareness or the accuracy of their perceptions. Third, it did not examine the role of attitude in successful reading. Further research in these areas as well as testing actual vocabulary knowledge, text comprehension and/or reading rates in either or both languages could shed further light on UL2 reading. Also, since the majority of this study's participants enjoy reading in their first language, it would be interesting to hear the opinions of those who do not like reading at all. Further research into the effectiveness of the teaching suggestions offered in this thesis to facilitate UL2 reading automaticity could also provide support or refute these recommendations. Finally, this study and/or any of the above extensions to it could be applied to the learning of other second languages.

By recognizing the challenge of learning a FL (UL2) and if UL2 is to survive and flourish, cooperation among the learner, the family, the community, and society, via institutions that validate and offer educational opportunities are the bare essentials required. It is hoped that the information gathered in this thesis will contribute to this goal. By developing automaticity in specific reading processes or skills, UL2 reading may be enhanced through the variety of teaching strategies offered in this final chapter. A combination of top-down and bottom-up approaches that capitalize on connectionist principles, that use authentic materials and that appeal to the age

group of the UL2 learners will hopefully lighten the student's cognitive load and thus, contribute to the completion of the journey to successful UL2 acquisition.

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Appendix A (Letter of Introduction/Consent Form)

Dear Parent,

My name is Gloria Michalchuk. I am graduate student at the University of Alberta in the Department of Secondary Education. For my Master's Thesis, I am interested in exploring ways in which reading in English and Ukrainian are the same and different. I would like to interview junior high and high school students studying Ukrainian regarding their memories and impressions of beginning reading and writing in both English and Ukrainian.

Based on this research, we may discover what facilitates or interferes with the reading and writing process in both English and Ukrainian. Furthermore, specific to Ukrainian, the data collected may give us insight into difficulties, problem areas, etc. which in turn may help develop effective teaching strategies to aid the student in the classroom. This information, once published, may also be helpful in designing reading materials or course curriculums.

Participation in the study is on a volunteer basis. The study will require the student to fill out a written questionnaire (10 -15 minutes) followed by an oral taped interview (30- 60) minutes, arranged at your convenience. A brief follow-up meeting (10-15 minutes) will also be arranged to ensure that the data gathered from the interview is accurate. Participation is on a volunteer basis therefore, participants may withdraw from the study at any time.

Please note that even though the interviews will be recorded and transcribed, all the information your child provides will be confidential and individual anonymity is guaranteed. The findings of the data will be used for my final thesis and may also appear in articles written for linguistic and educational purposes; but your child's name and his/her comments will never be identified. Final results of the study will also be available at your request.

This form requests your permission to have your child interviewed as a part of this research. If your child agrees, please ensure that both of you sign the form. Thank you for considering this request. If you have any questions please call me at 434-8137.

Parent's signature: _____ Date _____

Student's signature: _____ Date _____

Appendix B (Written Questionnaire)

Name _____ Age _____ M _____ F _____

1. What country were you born in? _____ If not Canada, then when did you arrive in Canada? _____

2. How old were you when you began school in English? (grade?) _____

3a) How old were you when you began school in Ukrainian? (grade?) _____

b) How many years were/have you been in the Ukrainian Bilingual Program? _____

c) How many years did you go to "Ridna Shkola"? _____

d) How many years did you go to "Kursy"? _____

4a) What language do you speak at home with your mother? Engl. _____ Ukr. _____ Other _____

b) How often? (list percentage/s eg. 80% Engl. 20% Ukr.) _____

5a) What language do you speak at home with your father? Engl. _____ Ukr. _____ Other _____

b) How often? (list percentage/s) _____

6a) What language do you speak with your brothers and sisters? Engl. _____ Ukr. _____

Other _____ b) How often? (list percentage/s) _____

7a) What language do you speak with your grandfather and grandmother?

Engl. _____ Ukr. _____ Other _____ b) How often? (list percentage/s) _____

8a) What language do you speak with your other relatives? Engl. _____ Ukr. _____ Other _____

b) How often? (list percentage/s) _____

9. Where do you speak Ukrainian other than in the classroom? (please check off)

Church _____ Schoolyard _____ With friends _____ Social events _____ Parties _____

Caroling _____ Dancing club _____ Choir _____ On the bus _____ PLAST/SUM/SUMK _____

When I don't want someone to know what I am saying _____ Other _____

(explain) _____

10. Where do you hear or listen to Ukrainian other than in the classroom? (check off)

Radio _____ TV _____ CD/tapes _____ Computer _____ At home _____ Church _____

Community Events _____ Parties _____ Music _____ At relatives _____ News _____

Broadcasts _____ Other (list) _____

11a) Do you remember being read to as a child by a parent, friend or relative in English? Yes _____ No _____

b) Can you remember your favorite story (s)? Yes _____ No _____ (please list) _____

Appendix B (cont.)

- 12 a) Do you remember being read to in Ukrainian by a parent, friend or relative?
Yes__ No__
- b) Can you remember your favorite story (s)? Yes__No__ (please list)_____
- 13 a) Which language did you first start reading in? English__ Ukrainian__ Both
at the same time__ Other (list) _____
- b) How old were you? (List the age and language) _____
- 14 a) Do you think you could read before you started school?
Yes__ No__ Unsure__
- b) If yes, in which language/s? English__ Ukrainian__ Other__
15. Could you write anything in English before you started school?
Yes__ No__ Unsure__
16. Could you write anything in Ukrainian before you started school?
Yes__ No__ Unsure__
17. Could you write anything in any other language/s before you started school?
Yes__ No__ Unsure__
18. How much did you like reading when you were in ... ? (please check off one per grade)

English

- Grade 1__I loved reading.
__I liked reading.
__I liked reading sometimes.
__I read only when I had to.
__I didn't like reading at all.
__I don't remember.

- Grade 5__I loved reading.
__I liked reading.
__I liked reading sometimes.
__I read only when I had to.
__I didn't like reading at all.
__I don't remember.

Ukrainian

- Grade 1__I loved reading.
__I liked reading.
__I liked reading sometimes.
__I read only when I had to.
__I didn't like reading at all.
__I don't remember.

- Grade 5__I loved reading.
__I liked reading.
__I liked reading sometimes.
__I read only when I had to.
__I didn't like reading at all.
__I don't remember.

Appendix B (cont.)Now ☐ I loved reading.☐ I liked reading.☐ I liked reading sometimes.☐ I read only when I had to.☐ I didn't like reading at all.☐ I don't remember.

Now

☐ I loved reading.☐ I liked reading.☐ I liked reading sometimes☐ I read only when I had to.☐ I didn't like reading at all.☐ I don't remember.

19. What do you like about being able to read and write in both Ukrainian and English?

(List 2 or 3 things if possible)

Appendix C (Oral Interview)

Have you signed the consent form along with your parent? Yes - No

Have you filled out a written survey? Yes No

I am recording this session so that it can be transcribed however, I will again mention that this information is confidential in that your personal identity is protected, is that ok with you? Yes No

1. Tell me about when you were first learning to read in English. What do you remember?

2. Approximately how old were you then? (age, grade level, etc.)

3. Tell me about when you first started to read in Ukrainian. What do you remember?

4. Approximately how old were you?

5. Does anything stand out in your mind about these early experiences in any of the languages? (eg. incidents, enjoyable moments, etc?)

6. Can you remember anything about the teachers who helped you learn to read and write in English? If so, what did they do that made it easier for you?

7. Can you remember anything about the teachers who helped you learn to read and write in Ukrainian? If so, what did they do that helped you to learn?

8. Can you remember any advice, tips, or help you had outside of school that helped you learn to read in English? If so, where and with whom did this take place? (e.g. at home, with friends, relatives, parents, etc)

9. How about in Ukrainian? (same question as above)

10. Is there any advice you would give to students first starting to read in English? Ukrainian? Is there anything you would recommend to make reading easier for them?

11. Do you remember anything you personally would do when you were first learning to read and write in English that helped you?

12. Do you remember anything you personally would do when you were first learning to read and write in Ukrainian that helped you?

(Appendix C cont.)

13. How about teachers? Any advice for those teaching reading in English? Ukrainian?

14. What types of stories did you find the easiest to read in English? Ukrainian? Why?

15. What types of stories did you find the most difficult to read in English? Ukrainian? Why?

16. Do any problems still persist when you are reading even now, in English? Ukrainian? What are they?

17. What do you think is different about learning to read/write in Ukrainian compared to English? What's easier? What's more difficult?